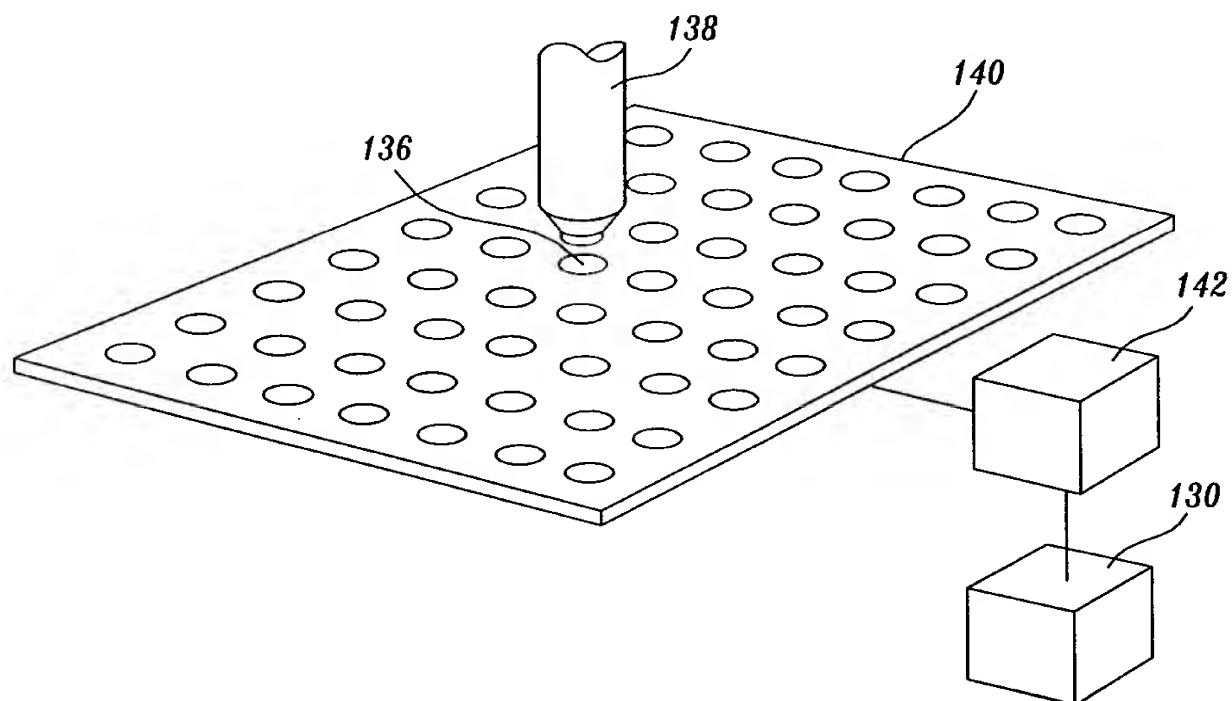


Fig. 1



*Fig. 1A.*

00631185-080200

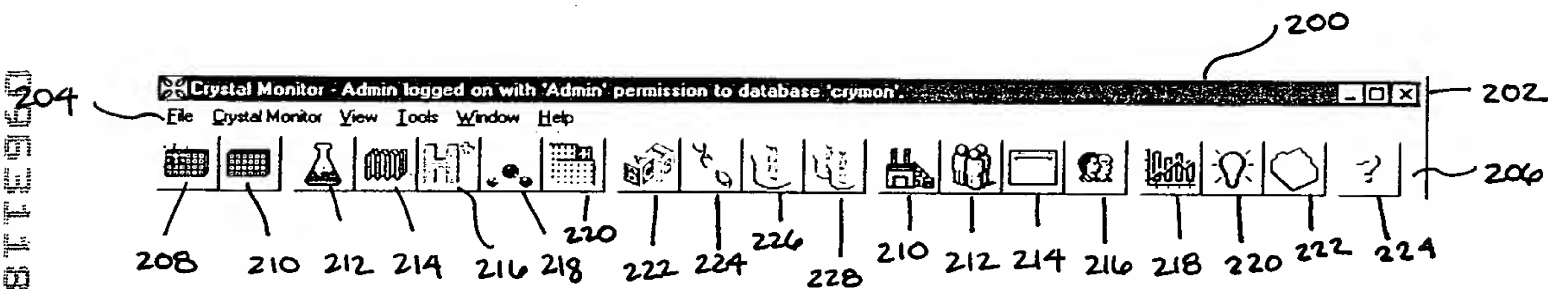
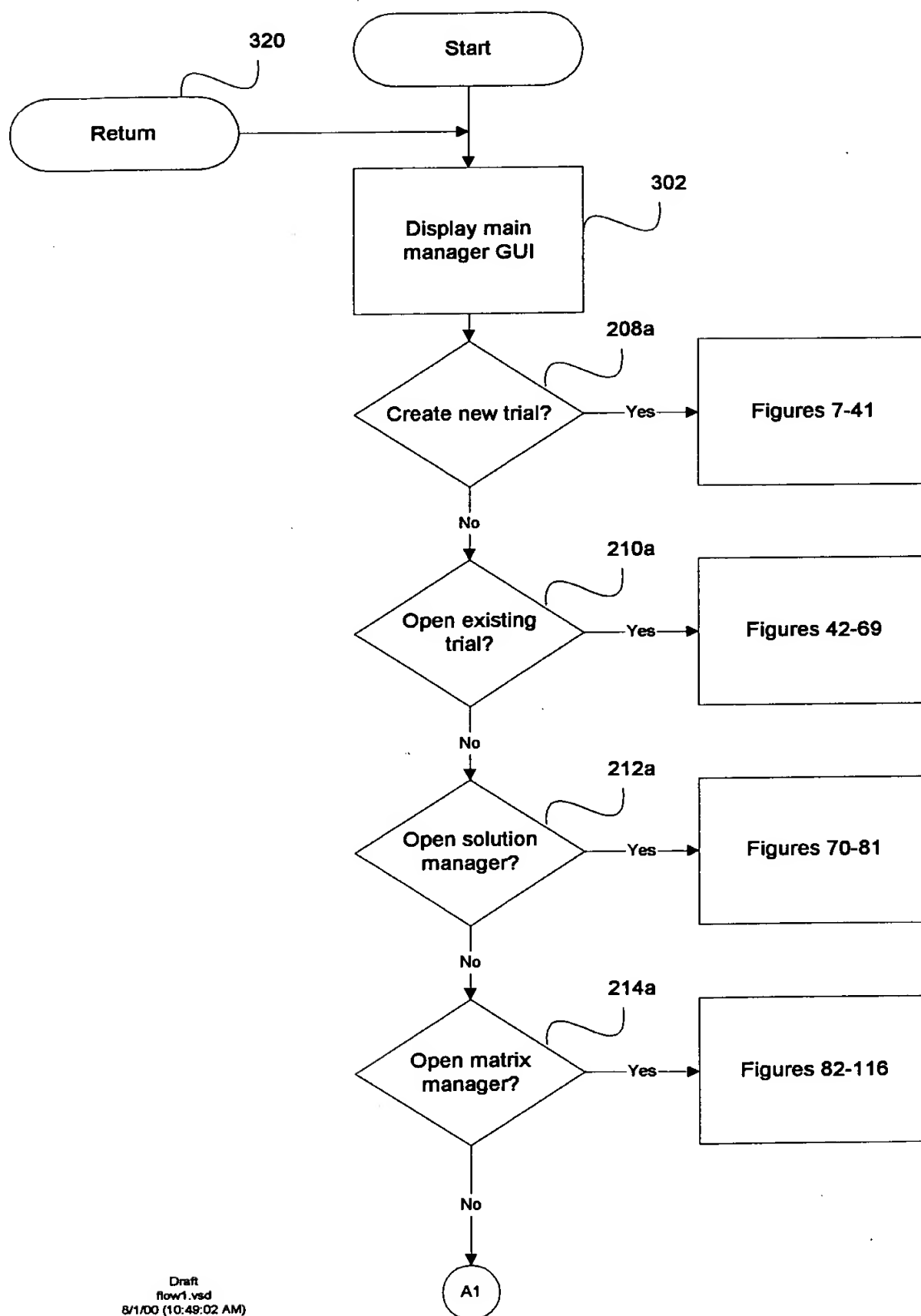


Fig. 2

002030" 58TTE960



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flow1.vsd  
8/1/00 (10:49:02 AM)

FIGURE 3



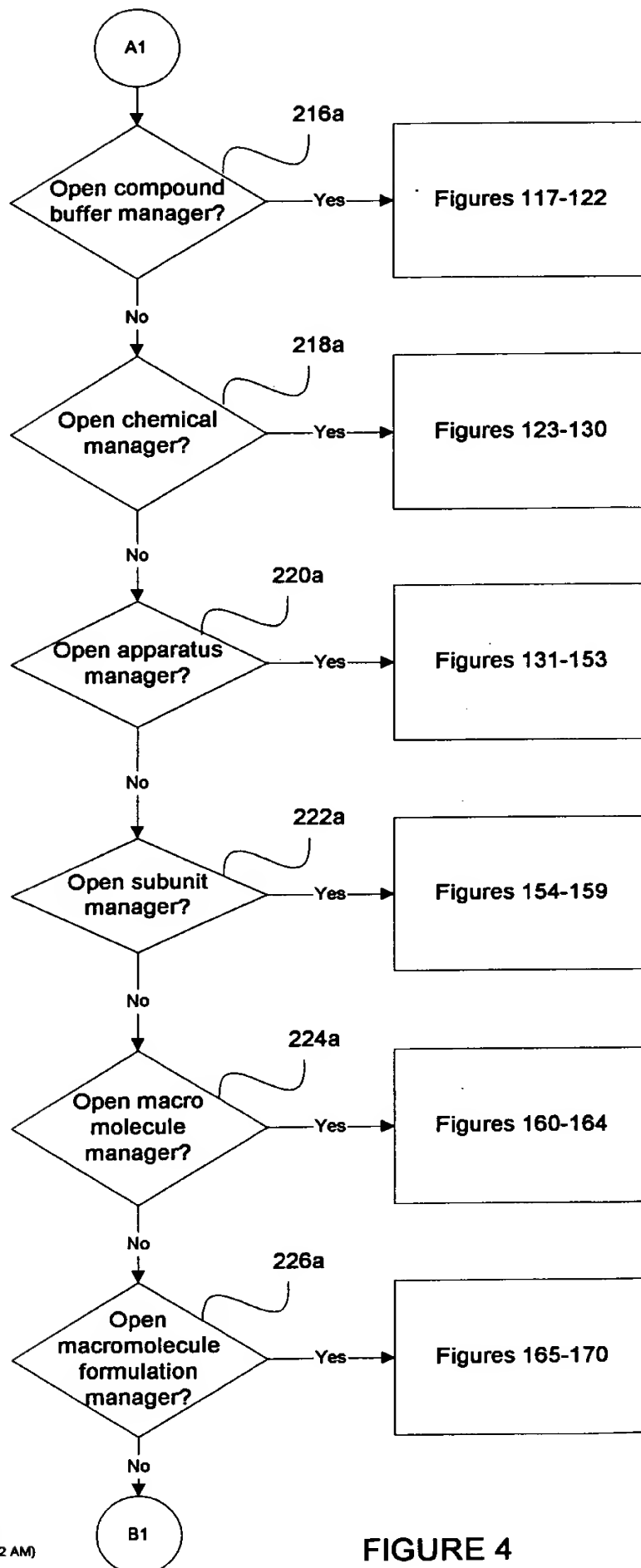


FIGURE 4

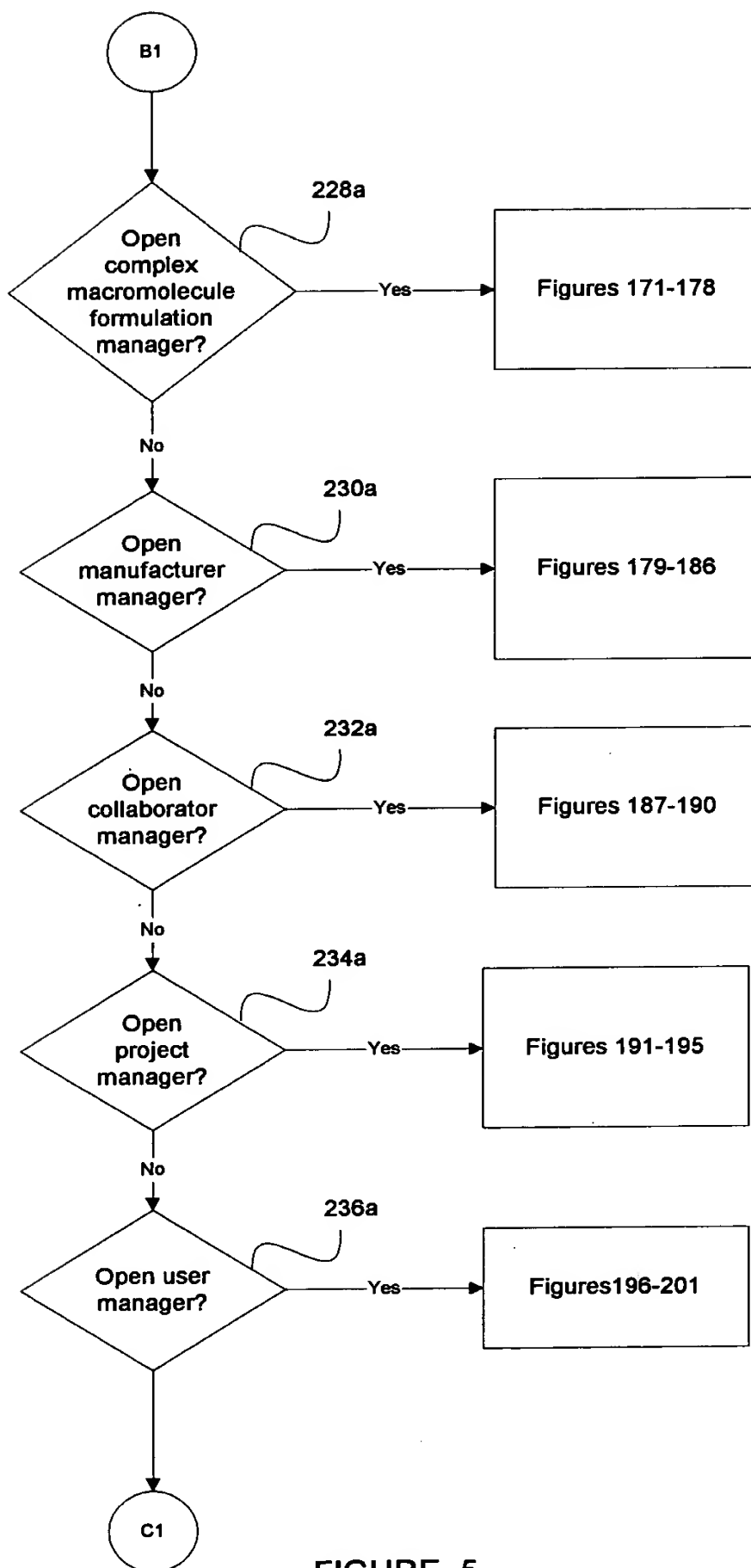


FIGURE 5

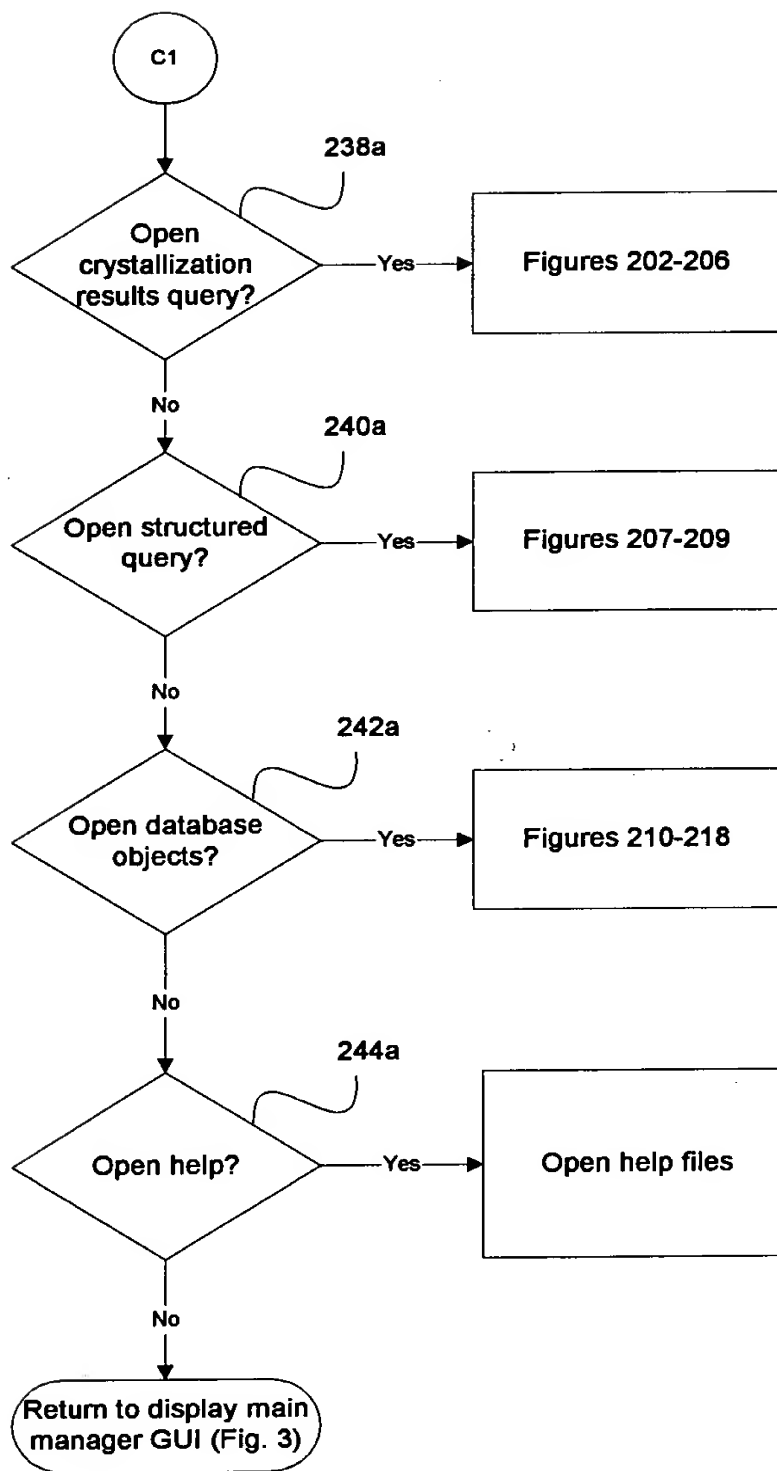
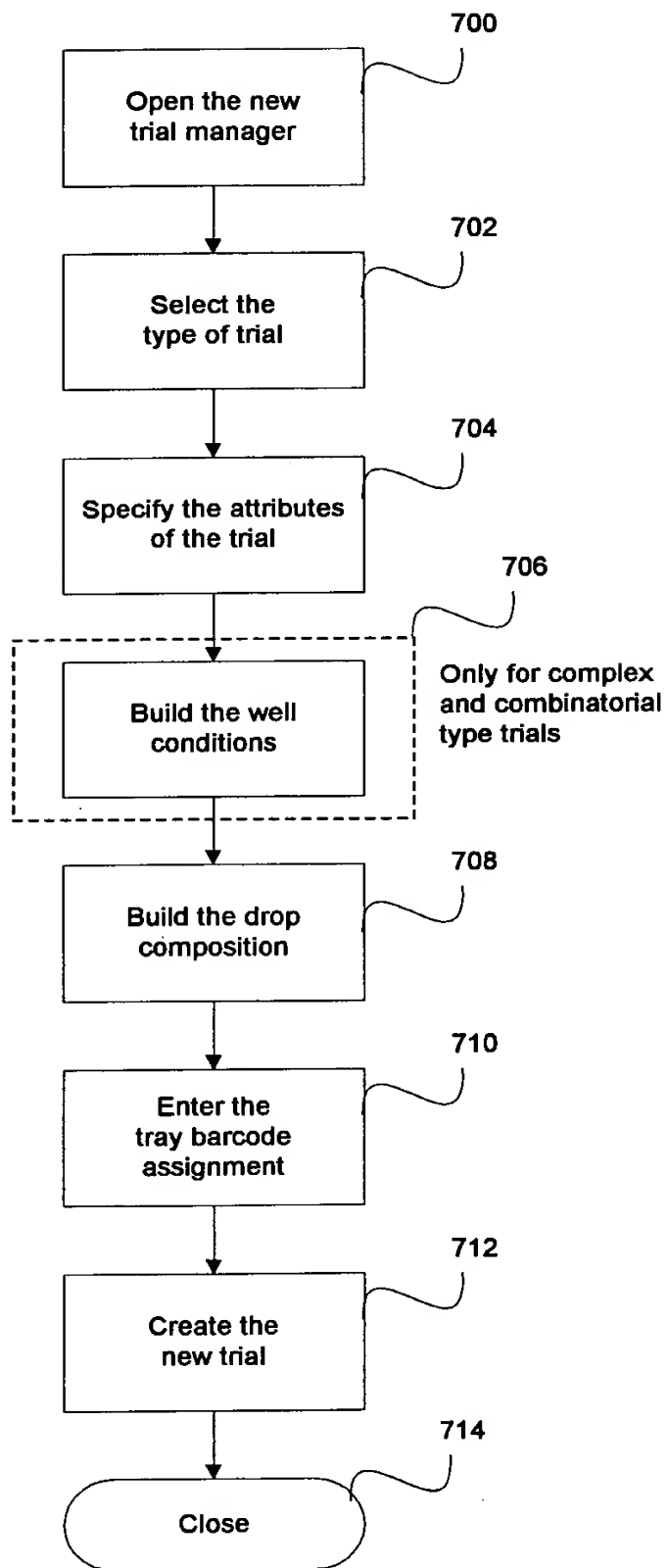


FIGURE 6

**FIGURE 7**

002000 5871960 0963135 080200

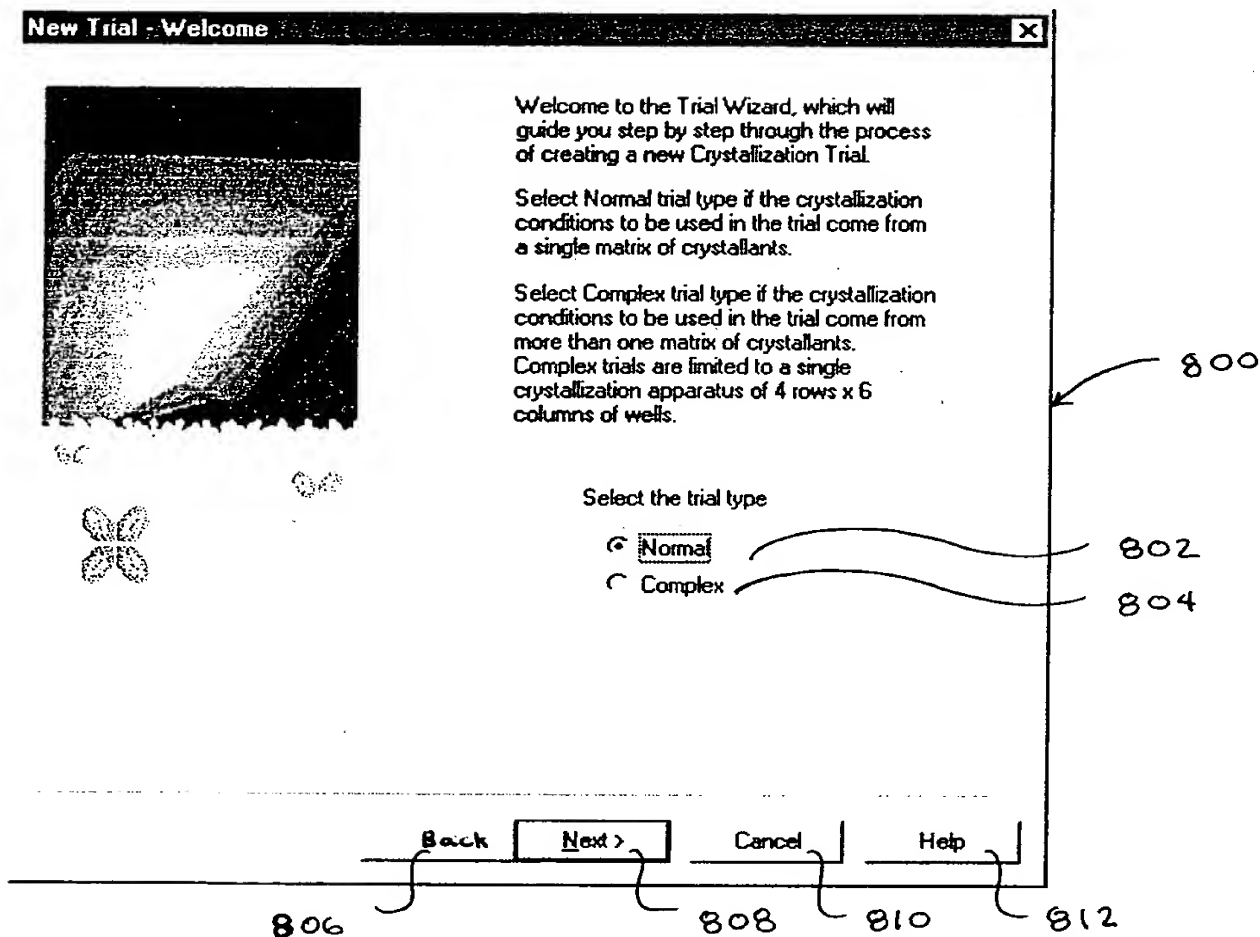


Fig. 8

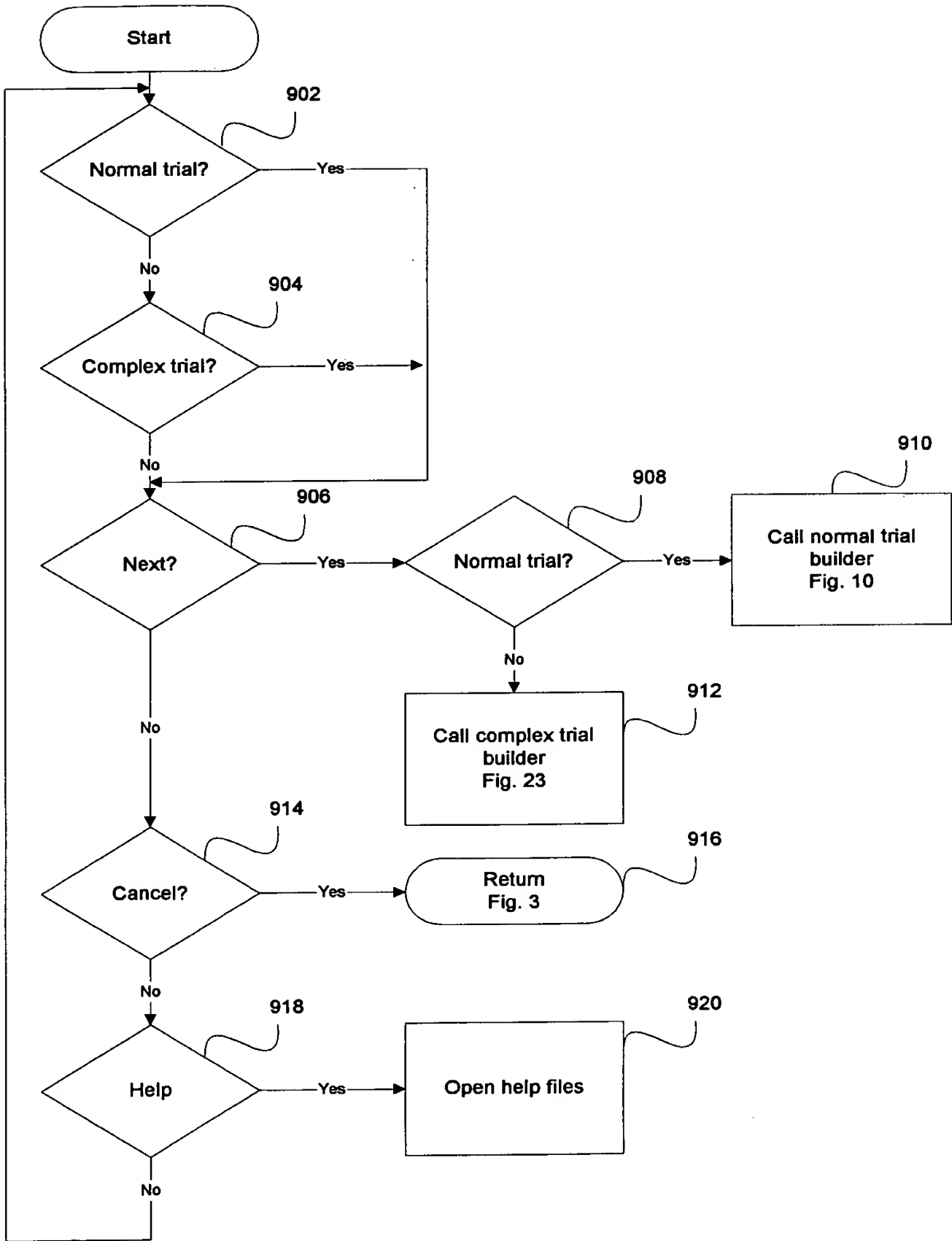


FIGURE 9

```

graph TD
    Start([Start]) --> 1002[/Call normal attributes builder  
Fig. 12/]
    1002 --> 1004{Back?}
    1004 -- Yes --> 1006([Return to Fig. 8])
    1004 -- No --> 1008{Next?}
    1008 -- Yes --> 1010([Jump to normal drop composition builder])
    1008 -- No --> 1012{Cancel?}
    1012 -- Yes --> 1014[Cancel new trial]
    1014 --> 1016([Return to Fig. 2])
    1012 -- No --> 1018{Help?}
    1018 -- Yes --> 1020[Open help files]
    1020 --> 1016
    1018 -- No --> 1022[/Call normal drop composition builder  
Fig. 16/]
    1022 --> 1024{Back?}
    1024 -- Yes --> 1026([Return to normal attributes builder])
    1024 -- No --> 1028{Next?}
    1028 -- Yes --> 1030{Drop in all wells?}
    1030 -- Yes --> 1032([Jump to normal tray barcode builder])
    1030 -- No --> 1034([Error])
    1028 -- No --> 1036{Cancel?}
    1036 -- Yes --> 1038[Cancel new trial]
    1038 --> 1040([Return to Fig. 2])
    1036 -- No --> A2((A2))
    1032 --> B2((B2))

```

**FIGURE 10**

Draft  
flow2.vsd  
8/1/00 (10:58:39 AM)

Draft  
flow2.vsd  
8/1/00 (10:58:39 AM)

002080" S8TTE960

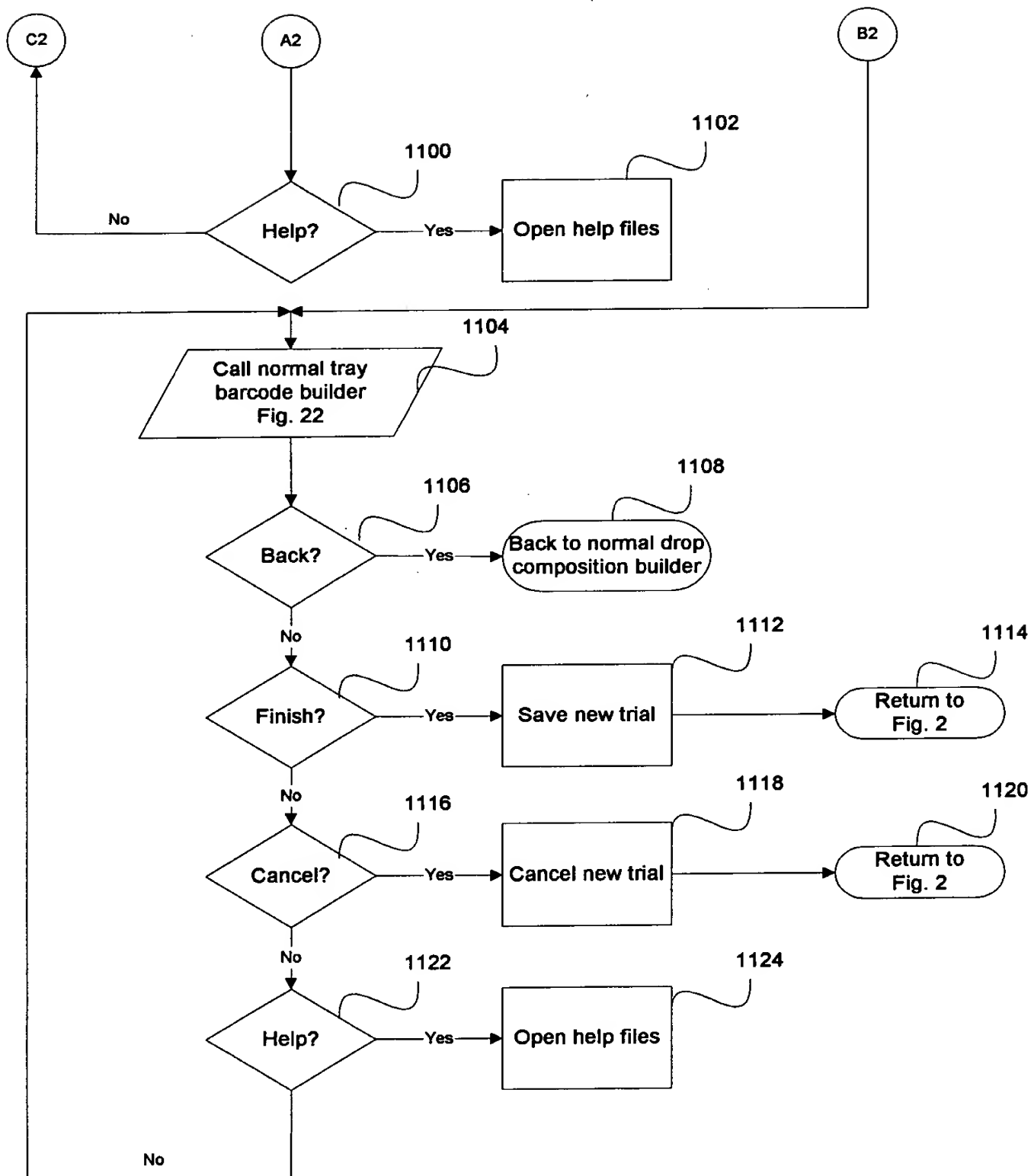


FIGURE 11



**New Trial - Specify Attributes**

Project:

Collaborator:

Apparatus:

Gas Purge:

Temperature:

Reservoir Volume:

Prep. Date:

Matrix:

Oil Overlay

Oil Overlay:

Oil Overlay Volume:

1202

Fig. 12

1204

1206

1232

1228

1210

1218

1212

1244

1200

1214

1220

1222

1226

1230

1234

1236

1238

1240

1242

1246

1250

1252

1256

1254

1260

1264

1262

1266

1208

1248

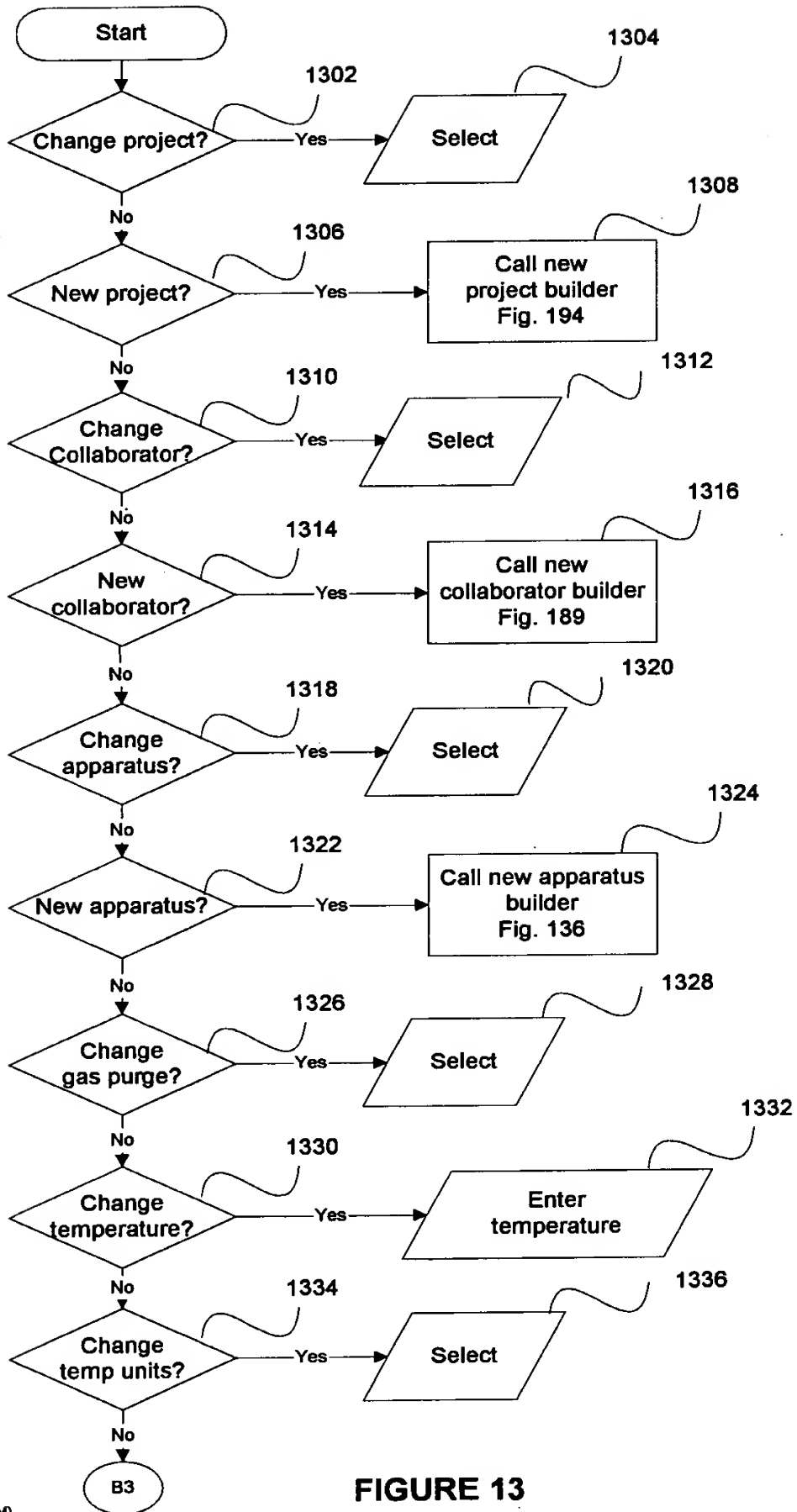


FIGURE 13

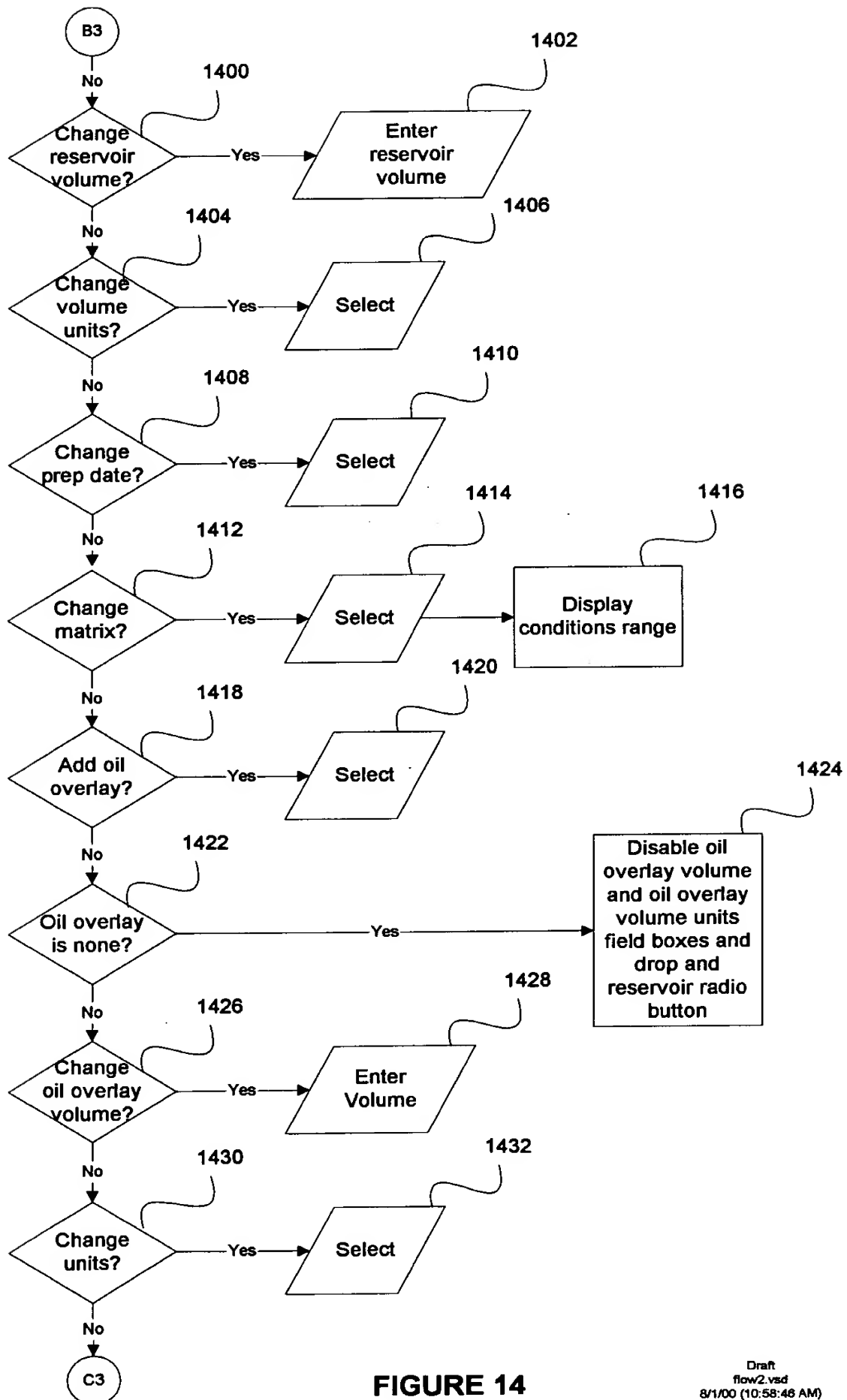


FIGURE 14

0963115-030200

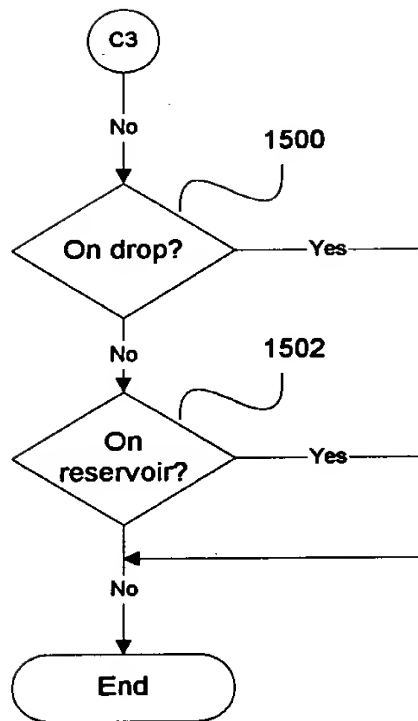


FIGURE 15

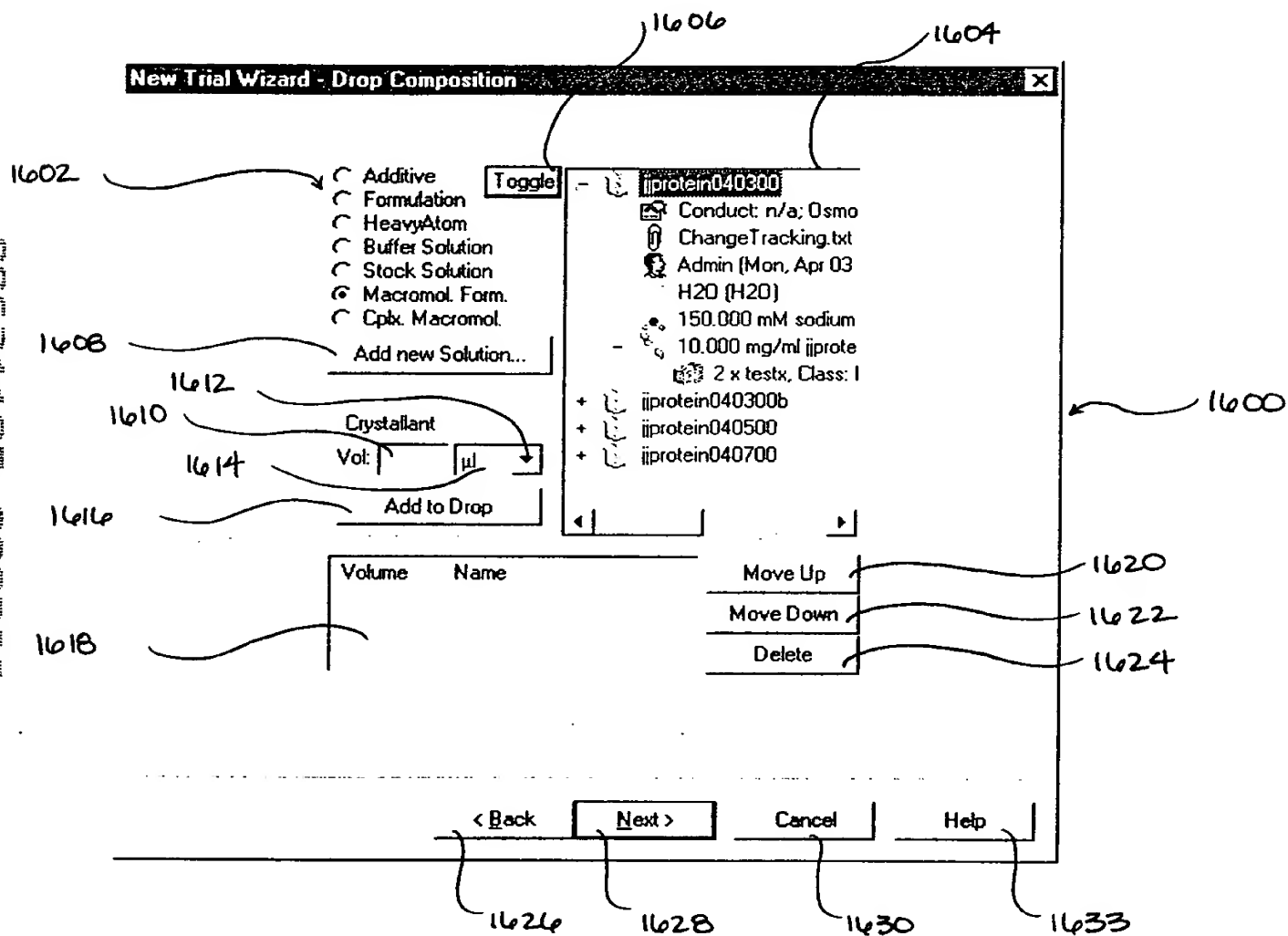


FIG. 16

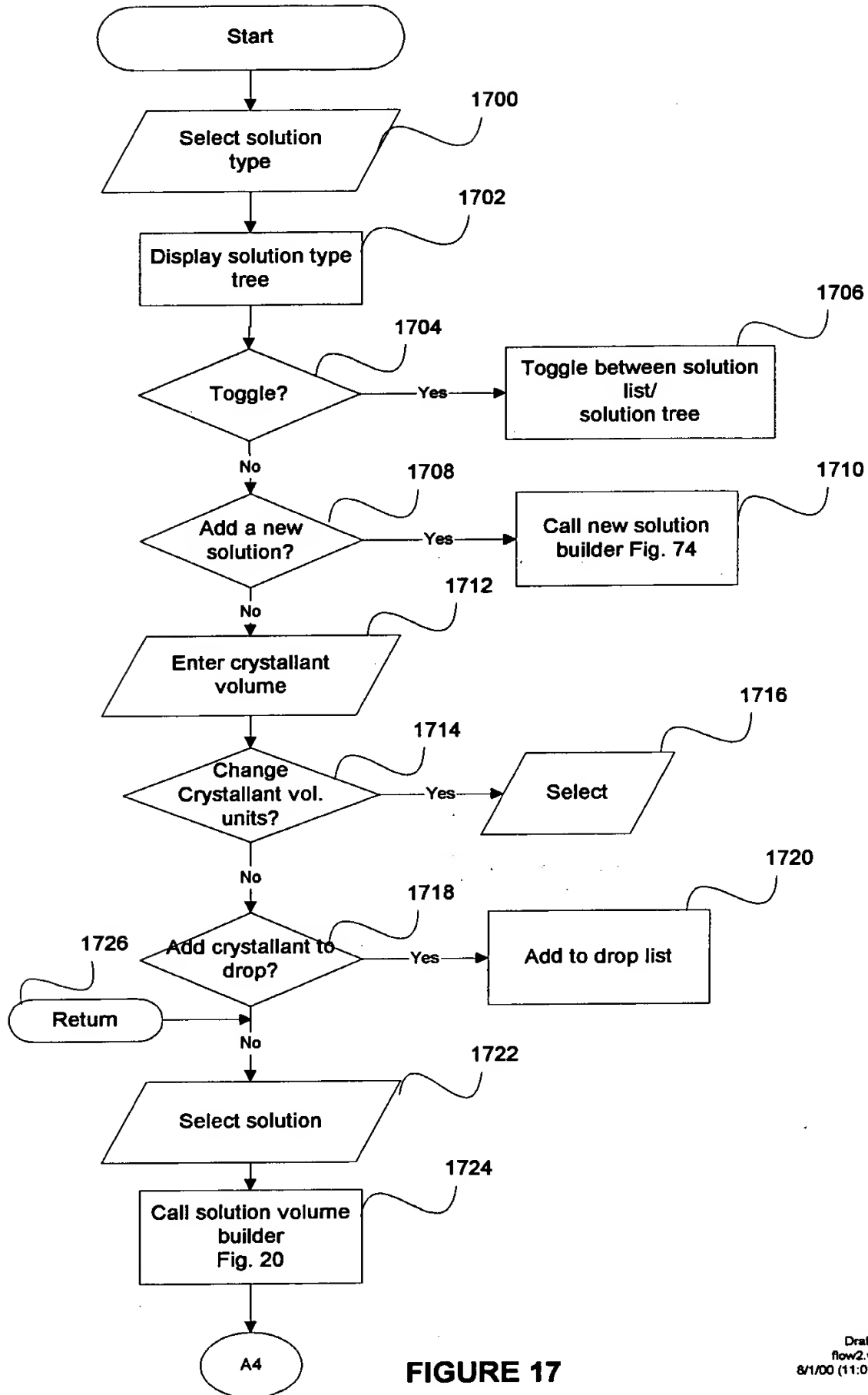


FIGURE 17

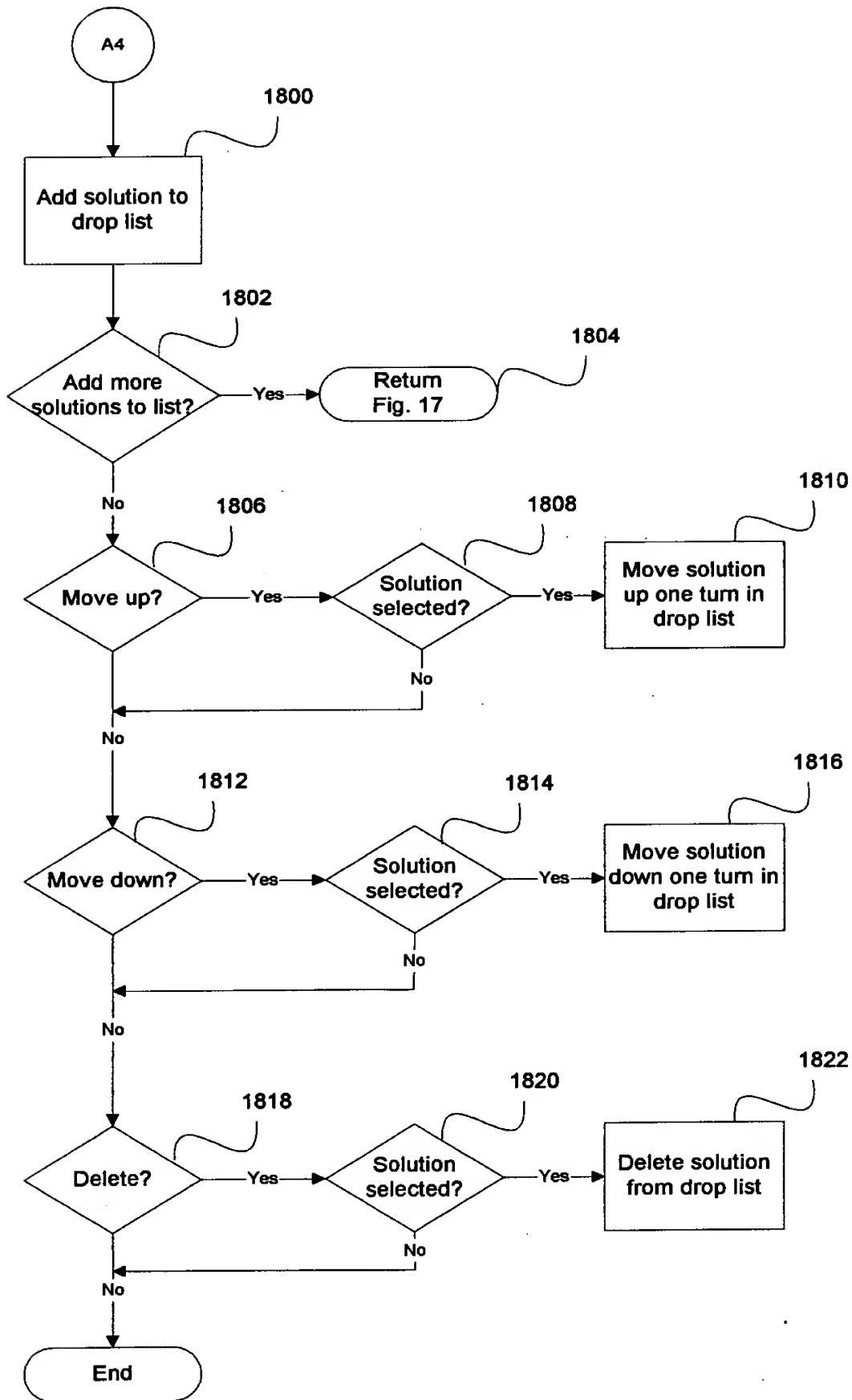


FIGURE 18

002030" 587E960

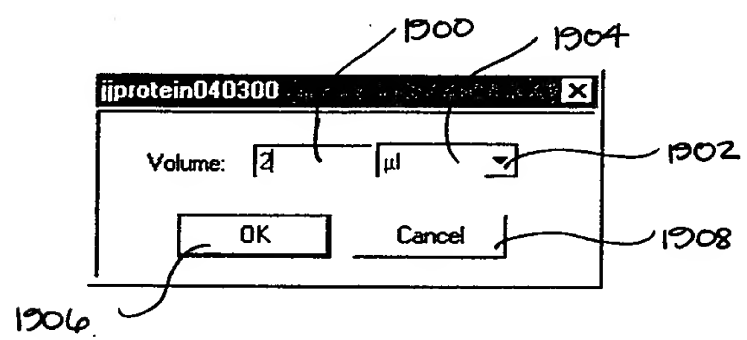


Fig. 19



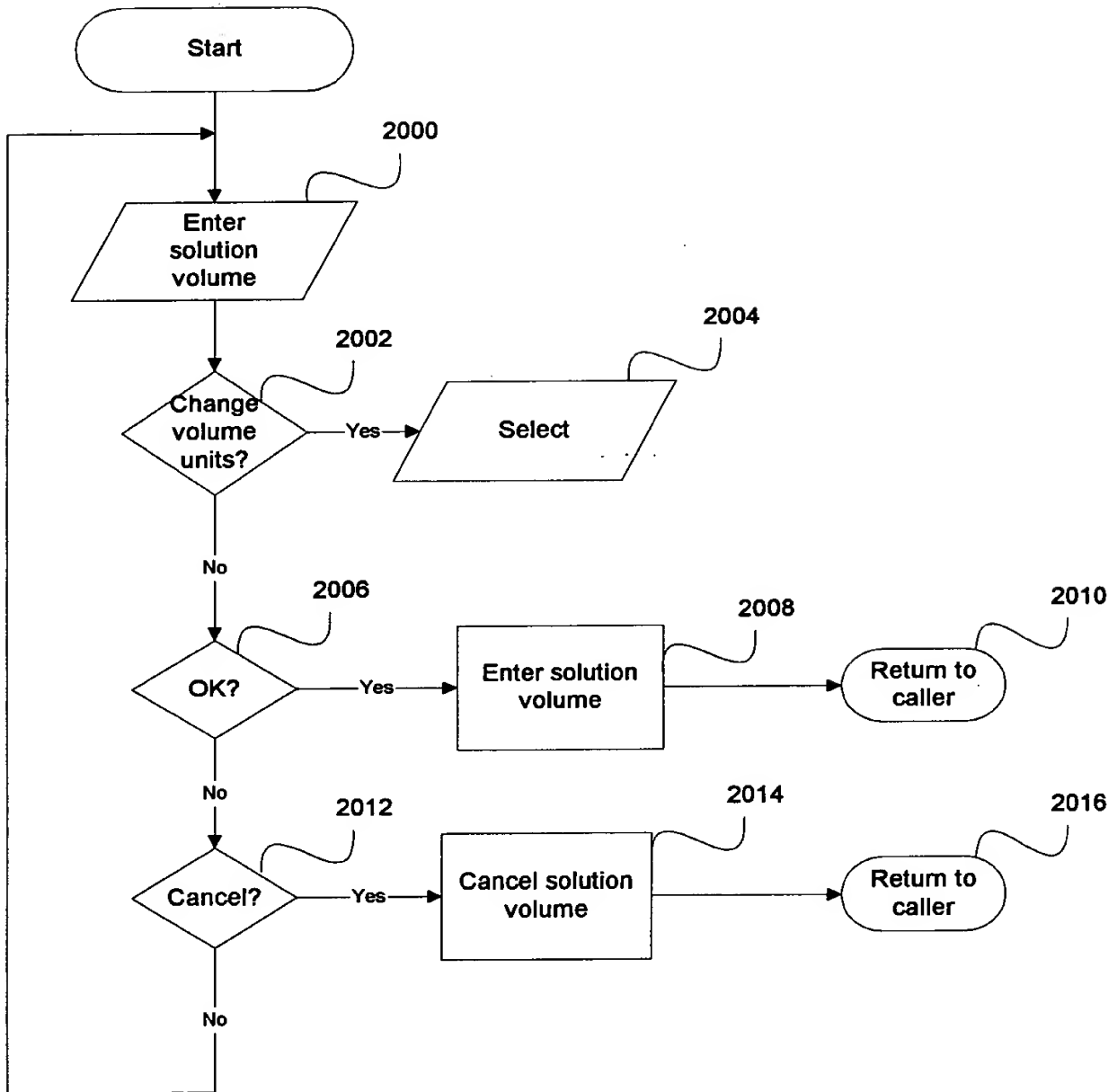


FIGURE 20

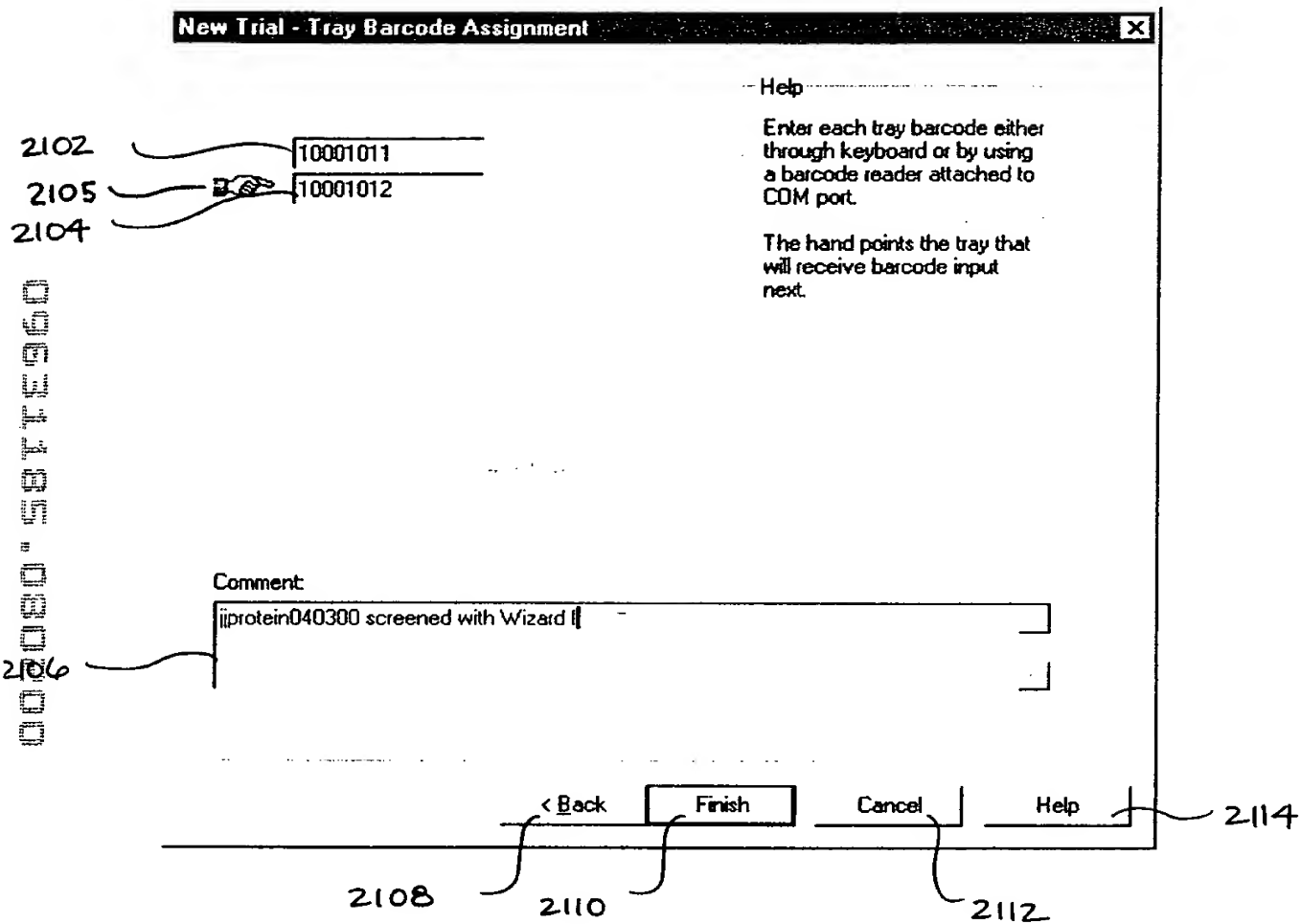
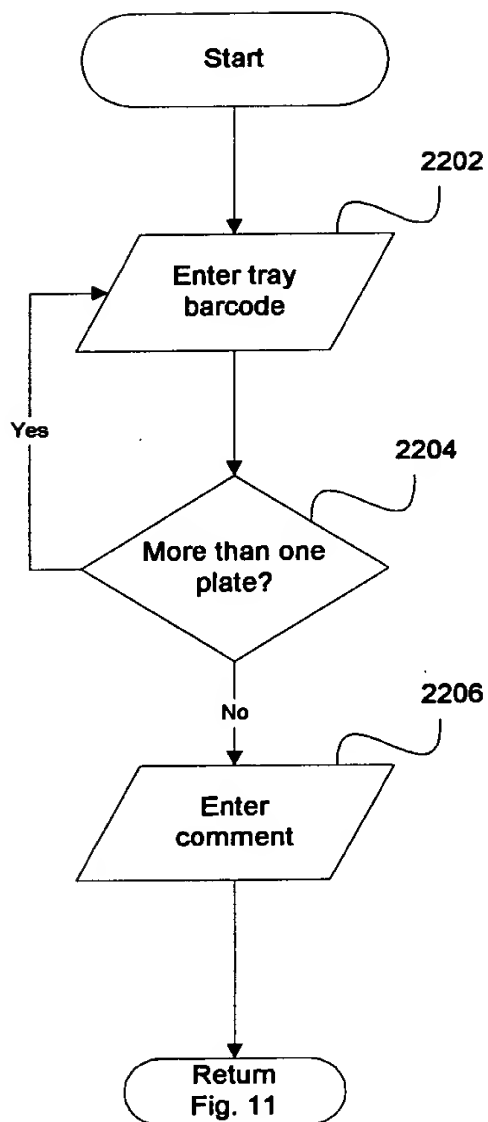


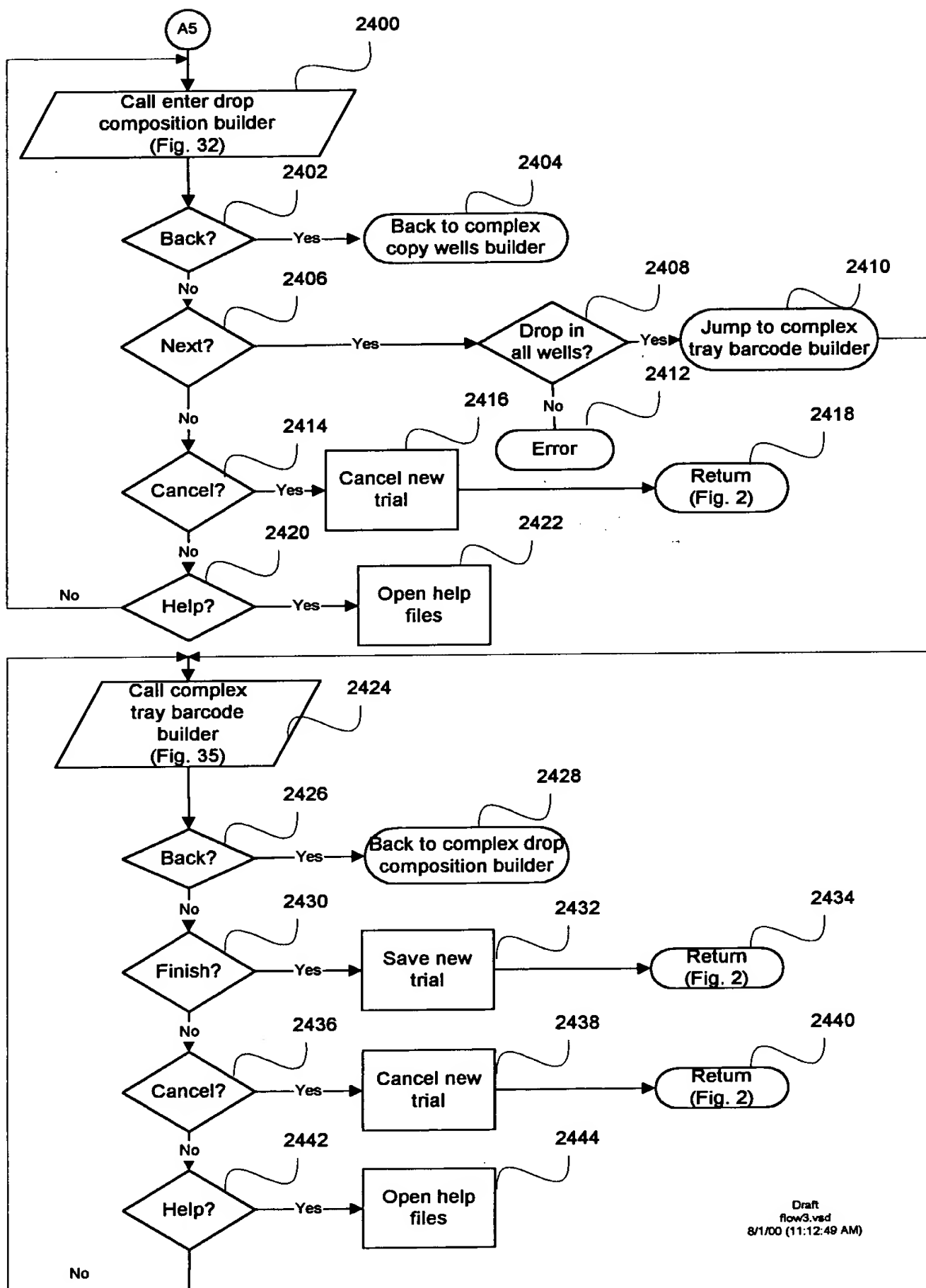
Fig. 21

002080" 58TTE960



**FIGURE 22**





Draft  
flow3.vsd  
8/1/00 (11:12:49 AM)

FIGURE 24

**New Trial - Specify Attributes**

Project: protein

Collaborator: Emerald BioStructures

Apparatus: Charles Supper plate

Gas Purge: <None>

Temperature: 25. C

Reservoir Volume: 200. µl

Prep. Date: 4/ 3/00

Oil Overlay

Oil Overlay: <None>

Oil Overlay Volume:

< Back Next > Cancel Help

Callout numbers: 2500, 2528, 2522, 2524, 2514, 2504, 2501, 2502, 2508, 2510, 2506, 2516, 2512, 2518, 2520, 2524, 2530, 2532, 2534, 2536, 2540, 2538, 2542, 2544, 2546, 2550, 2548, 2552, 2554, 2556, 2558.

Fig. 25

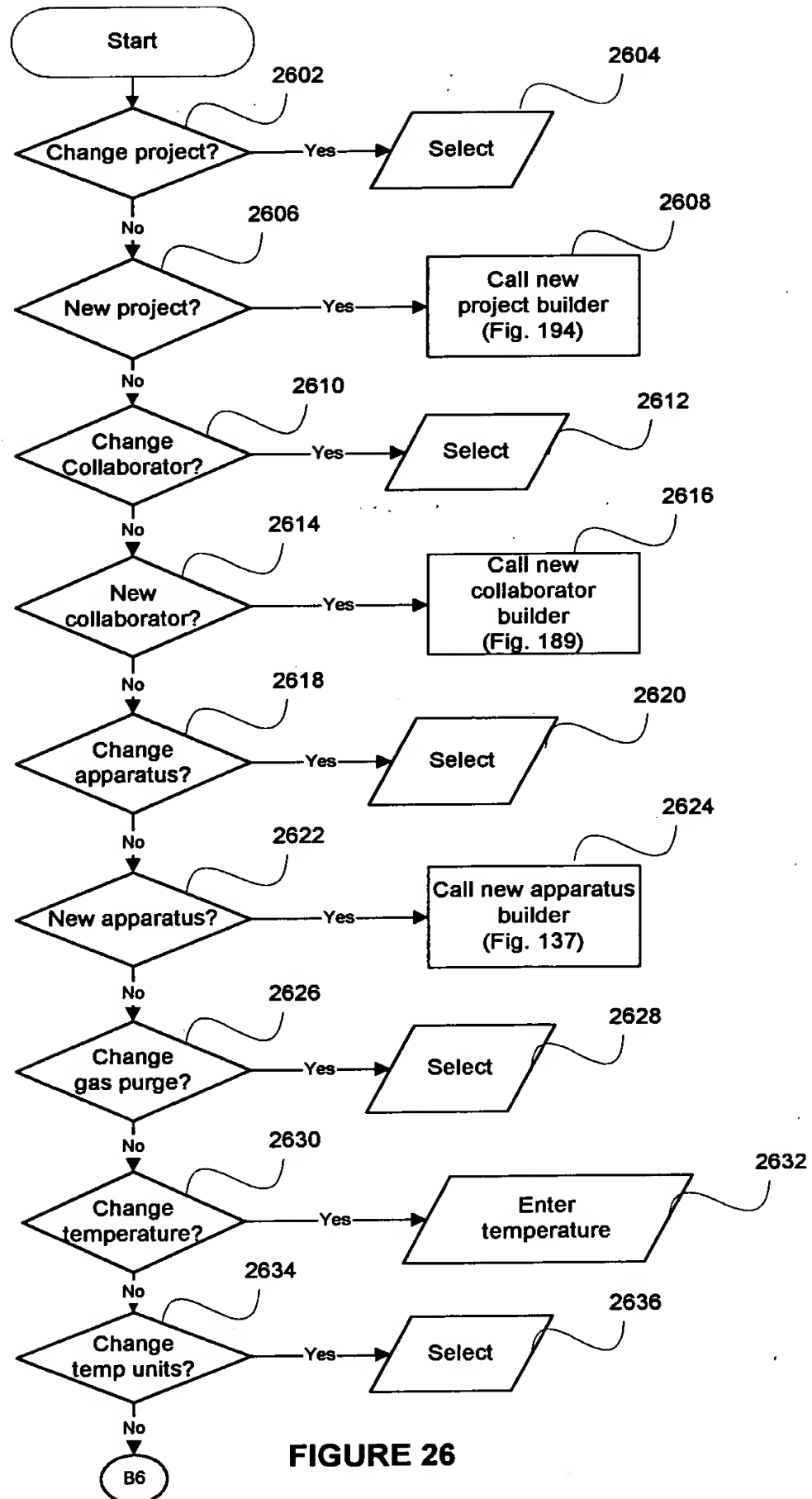


FIGURE 26

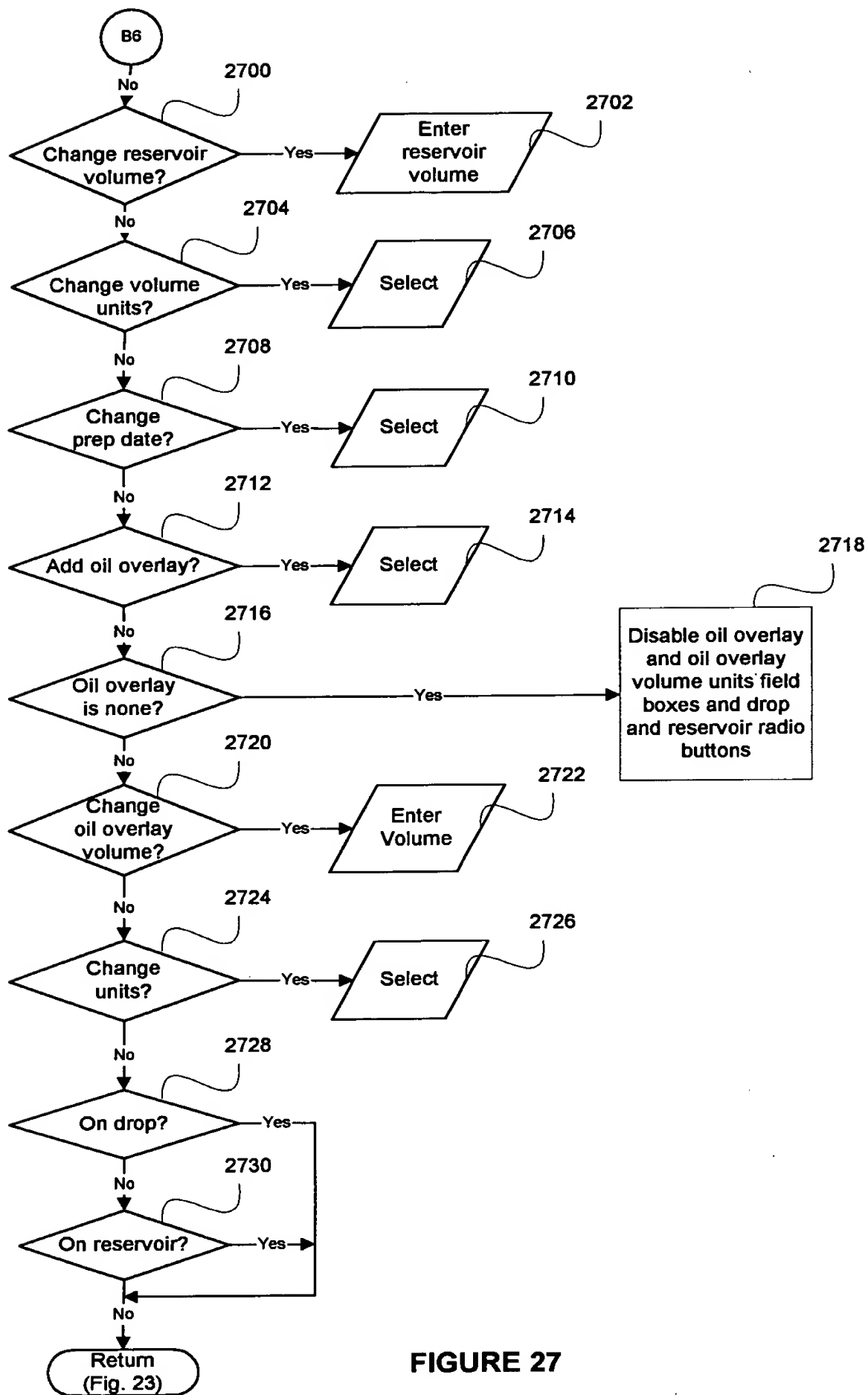


FIGURE 27



**New Trial Wizard - Copy Well**

Select Source Matrix: **Cryo1 (48 conditions)**

Dilution [%]: **100** Dilute sel: **Clear** Sel all...: **2** **Copy** Copy all

**Charles Supper plate**

pH 4.20	pH 4.50	pH 5.50	pH 7.50	pH 5.50	pH 6.50
pH 8.50	pH 6.50	pH 4.20	pH 8.00	pH 8.50	pH 4.50
pH 6.00	pH 4.20	pH 9.50	pH 6.00	pH 7.50	pH 8.00
pH 8.50	pH 5.50	pH 4.50	pH 6.20	pH 7.00	pH 6.20
pH 8.50	pH 9.50	pH 10.50	pH 7.50	pH 9.50	pH 5.50

**4x Combinatorial**

pH 4.50	pH 4.50	pH 4.50	pH 4.50	pH 4.50	pH 4.50
Cryo1 2	Cryo1 2	Cryo1 2	Cryo1 2	Cryo1 2	Cryo1 2
pH 4.50	pH 4.50	pH 4.50	pH 4.50	pH 4.50	pH 4.50
Cryo1 2	Cryo1 2	Cryo1 2	Cryo1 2	Cryo1 2	Cryo1 2

pH 5.50 pH 9.50 pH 8.00 pH 8.00 pH 7.50 pH 7.00

**Emerald's Cryo I Crystal Growth Matrix. All crystallants (1-48) flash-freeze as an amorphous glass at 100 K.**

< Back Next > Cancel Help

FIG. 28

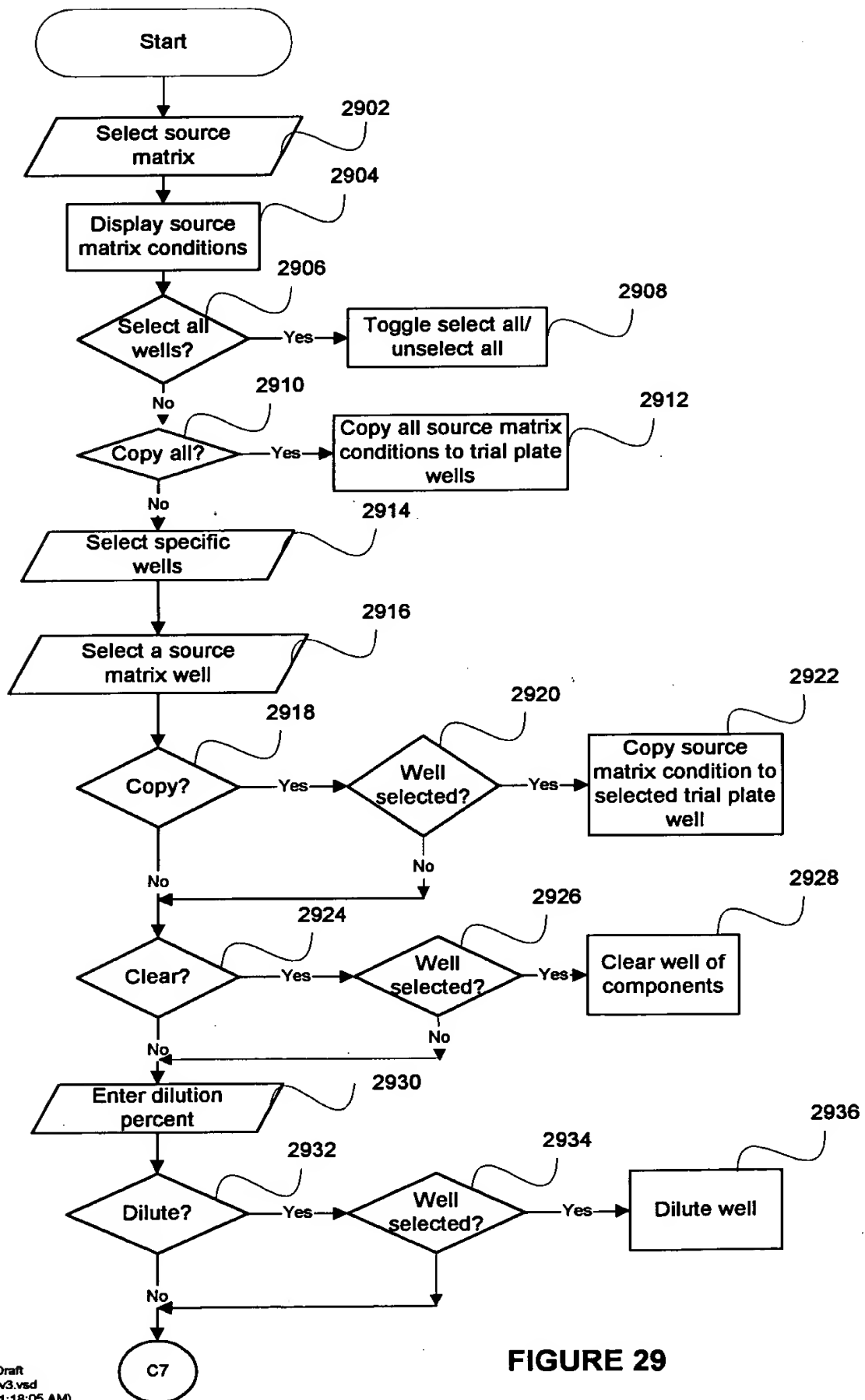


FIGURE 29

002080" 58TTE960

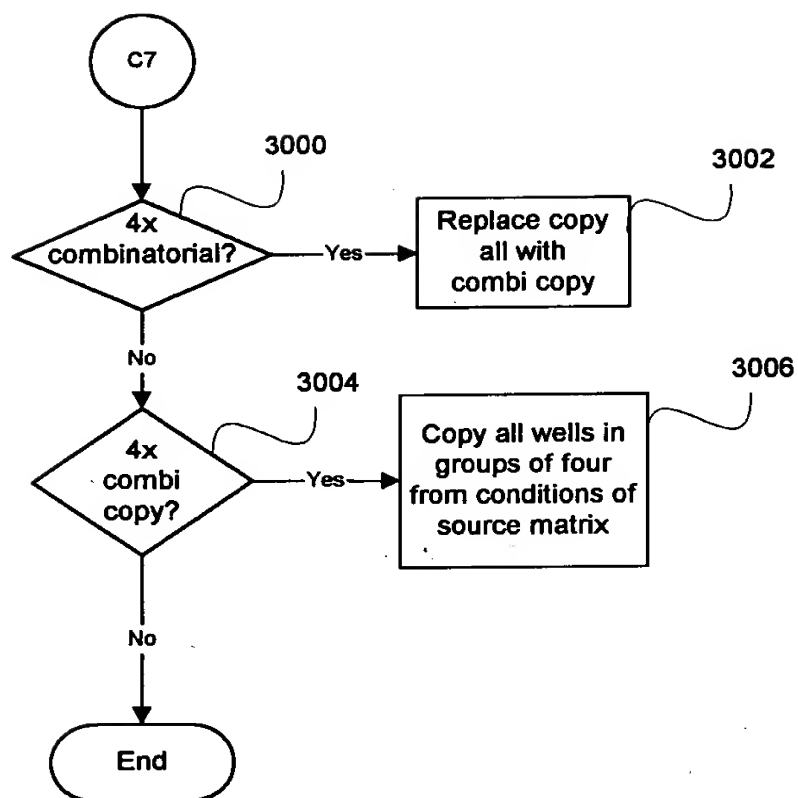


FIGURE 30

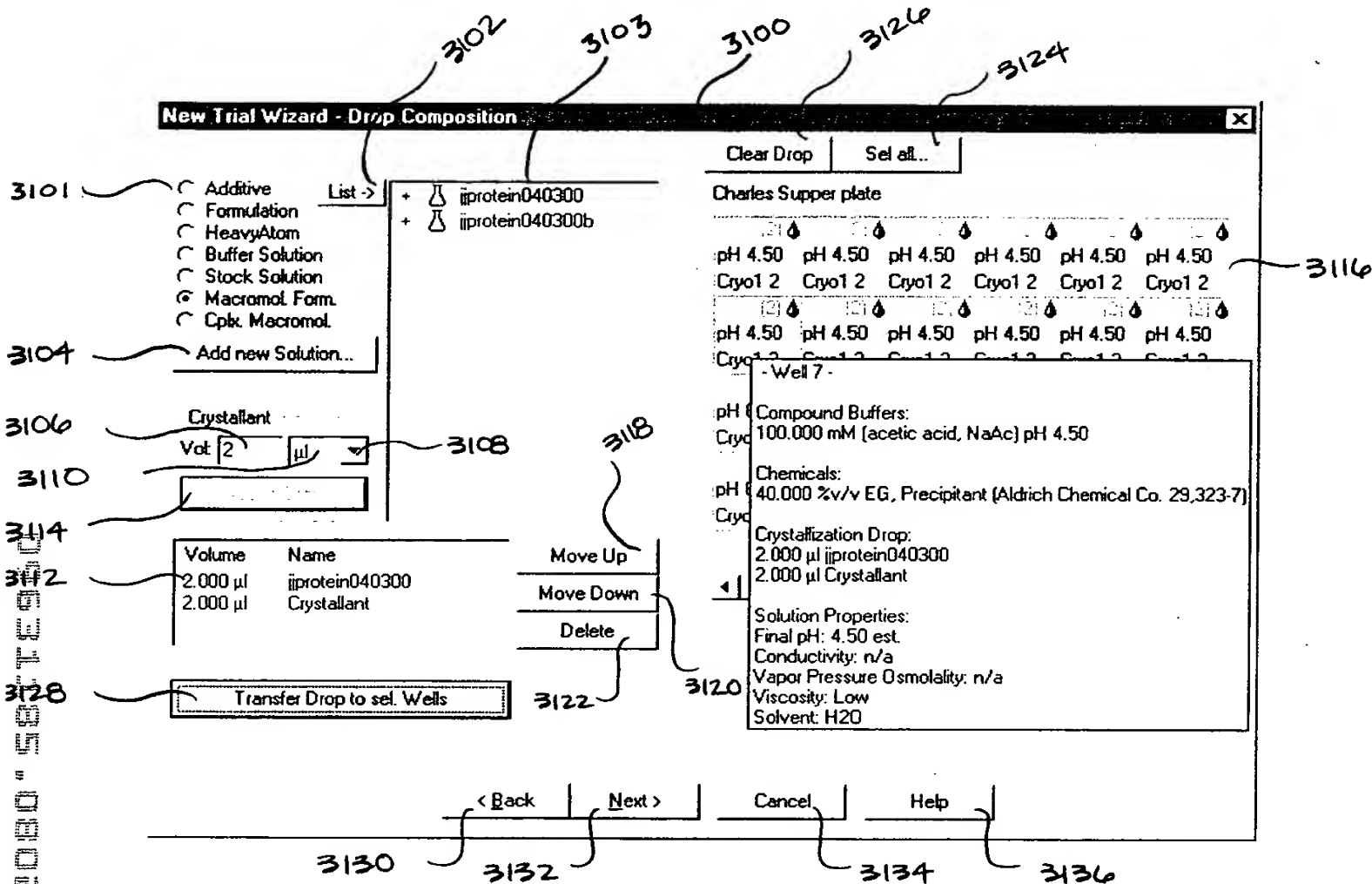
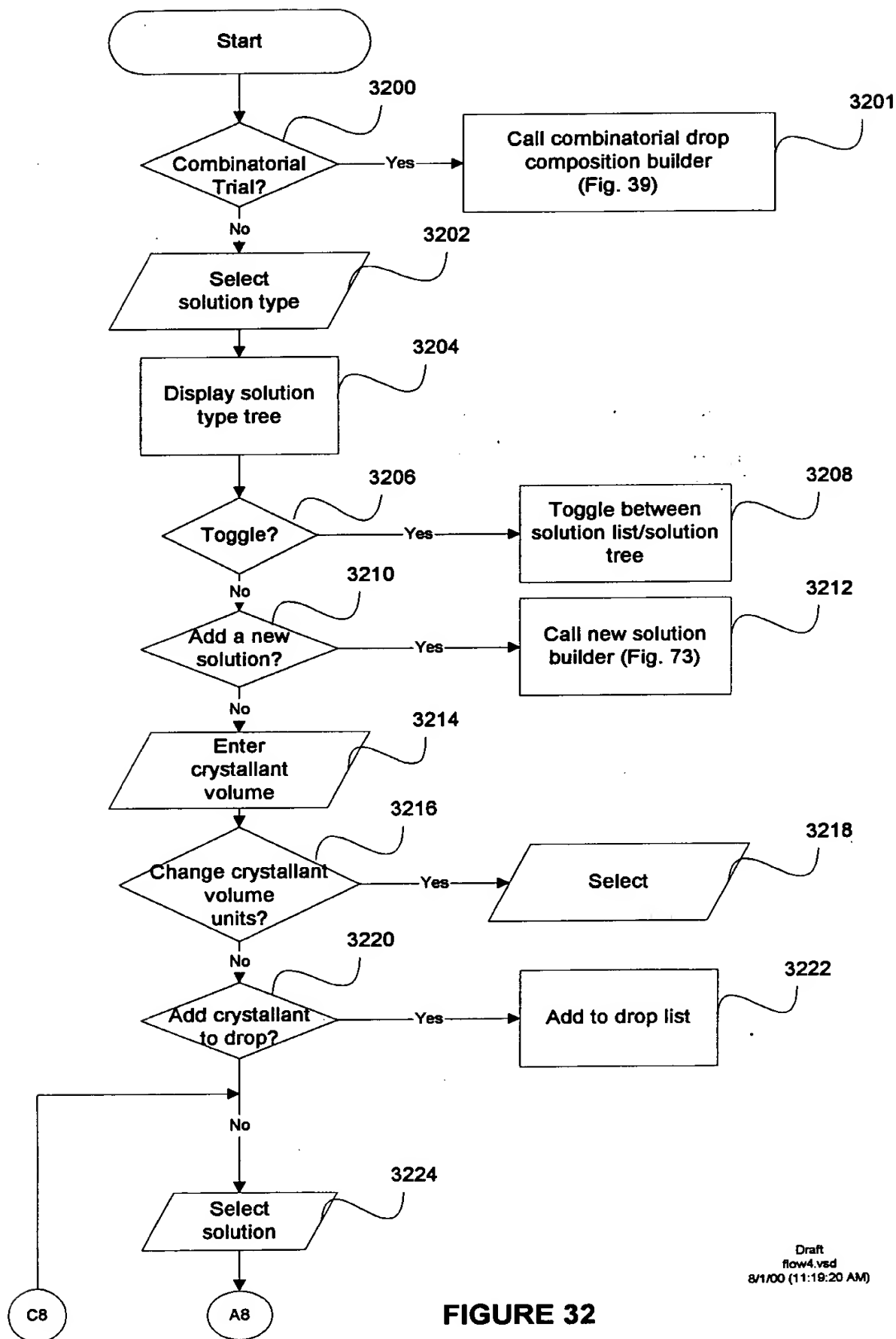


FIG. 31

09631185.030200



Draft  
flow4.vsd  
8/1/00 (11:19:20 AM)

FIGURE 32

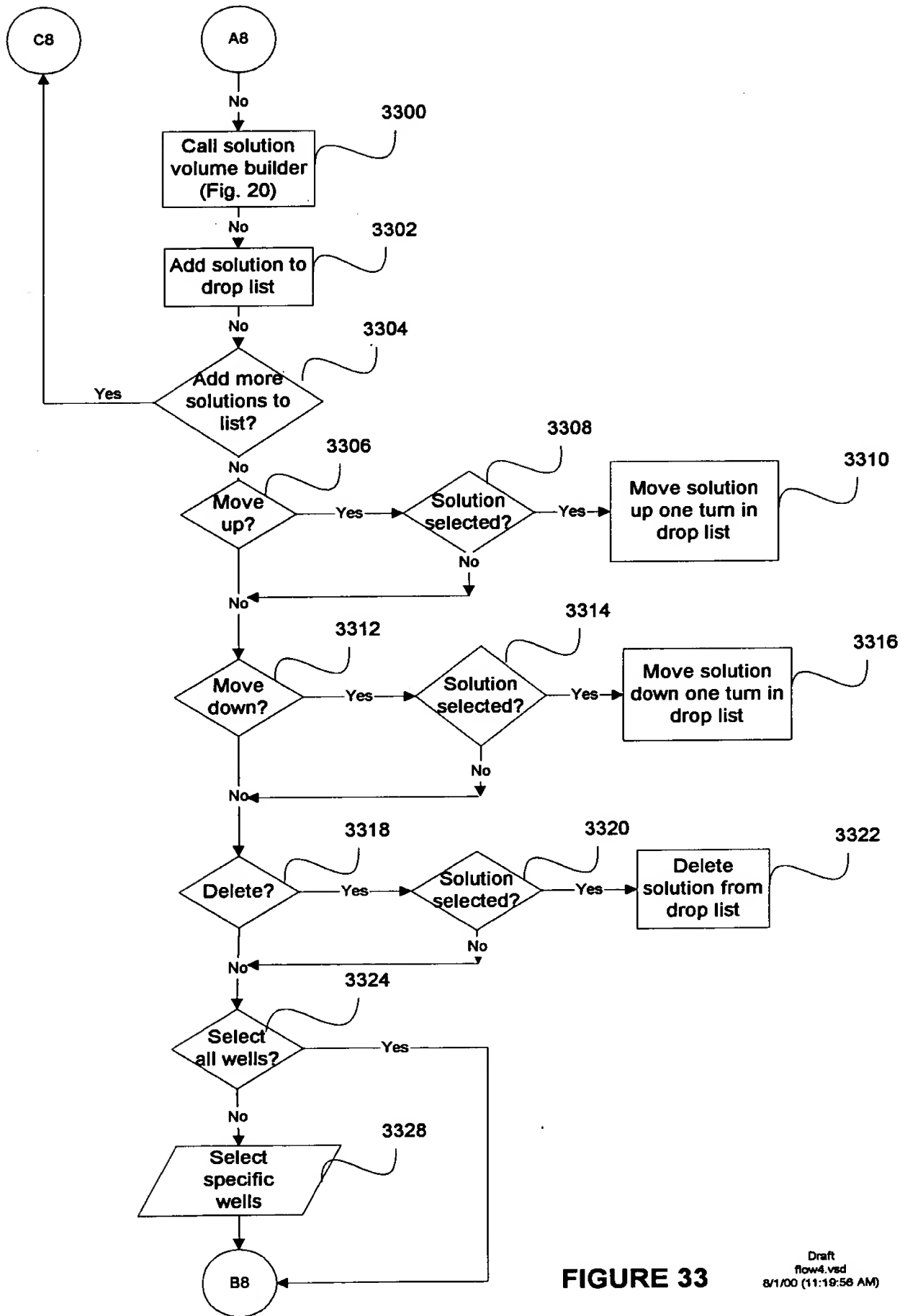


FIGURE 33

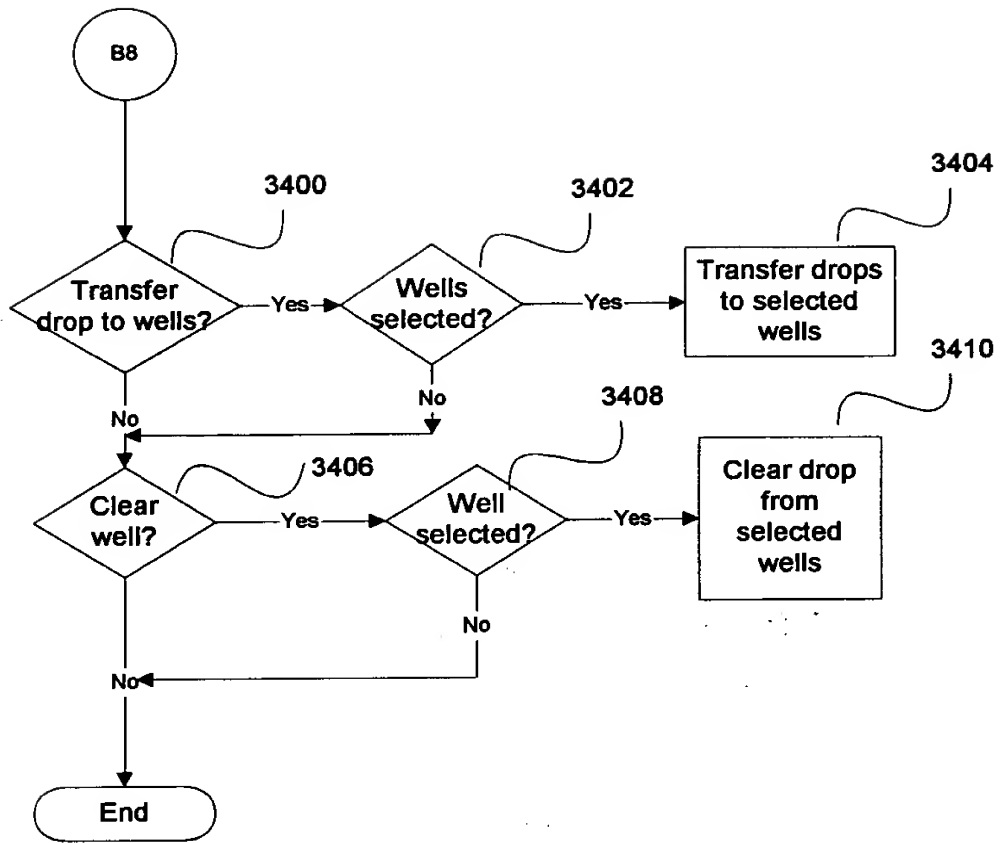


FIGURE 34

002080 587E960 09631185 080200

3500

New Trial - Tray Barcode Assignment

3501

10009999

Help

Enter each tray barcode either through keyboard or by using a barcode reader attached to COM port.

The hand points the tray that will receive barcode input next.

Comment:

3502

ijprotein040300 in Cryo I #2, and ijprotein040300b in Cryo II #11

3504

< Back

3506

Finish

3508

Cancel

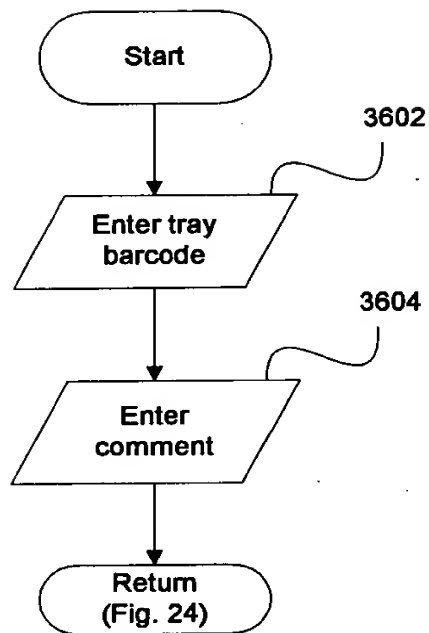
Help

3510

Fig. 35



002080" 58TE960



**FIGURE 36**

09631185-080200

3700

3706

New Trial Wizard - Copy Well

Select Source Matrix: Wzrd1 (48 conditions) 3708

Dilution [%]: 100

Dilute sel: Clear Sel all...

Copy: 4x Combi Copy 3704

VDX plate 4x combi ☒ 4x Combinatorial

pH 9.50	pH 7.50	pH 9.50	pH 8.00	pH 10.50	pH 5.50	pH 9.50	pH 9.50	pH 7.50	pH 7.50	pH 9.50	pH 9.50
Wzrd1 1	Wzrd1 1	Wzrd1 2	Wzrd1 2	Wzrd1 3	Wzrd1 3	Wzrd1 1	Wzrd1 1	Wzrd1 2	Wzrd1 2	Wzrd1 3	Wzrd1 3
pH 6.00	pH 5.50	pH 4.50	pH 7.00	pH 6.00	pH 8.00	pH 9.50	pH 9.50	pH 7.50	pH 7.50	pH 9.50	pH 9.50
Wzrd1 1	Wzrd1 1	Wzrd1 2	Wzrd1 2	Wzrd1 3	Wzrd1 3	Wzrd1 1	Wzrd1 1	Wzrd1 2	Wzrd1 2	Wzrd1 3	Wzrd1 3
pH 6.50	pH 6.50	pH 8.00	pH 6.20	pH 4.50	pH 8.00	pH 6.00	pH 6.00	pH 5.50	pH 5.50	pH 4.50	pH 4.50
Wzrd1 7	Wzrd1 7	Wzrd1 8	Wzrd1 8	Wzrd1 9	Wzrd1 9	Wzrd1 7	Wzrd1 7	Wzrd1 8	Wzrd1 8	Wzrd1 9	Wzrd1 9
pH 7.00	pH 8.00	pH 7.50	pH 8.50	pH 8.00	pH 7.00	pH 6.00	pH 6.00	pH 5.50	pH 5.50	pH 4.50	pH 4.50
Wzrd1 7	Wzrd1 7	Wzrd1 8	Wzrd1 8	Wzrd1 9	Wzrd1 9	Wzrd1 7	Wzrd1 7	Wzrd1 8	Wzrd1 8	Wzrd1 9	Wzrd1 9
pH 8.50	pH 9.50	pH 10.50	pH 7.50	pH 9.50	pH 4.50	pH 6.50	pH 6.50	pH 6.50	pH 6.50	pH 8.00	pH 8.00
Wzrd1 13	Wzrd1 13	Wzrd1 14	Wzrd1 14	Wzrd1 15	Wzrd1 15	Wzrd1 13	Wzrd1 13	Wzrd1 14	Wzrd1 14	Wzrd1 15	Wzrd1 15
pH 4.20	pH 6.20	pH 10.50	pH 8.00	pH 4.50	pH 8.00						

3702

3701

Emerald's Wizard I Crystal Growth Matrix. A random sparse matrix of crystallants [1-48].

3710 < Back

3712 Next >

3714 Cancel

3716 Help

FIG. 37

3800

3801

### New Trial Wizard - Drop Composition

Clear Drop    Sel all...

☐ Additive  
☐ Formulation  
☐ HeavyAtom  
☐ Buffer Solution  
☐ Stock Solution  
☒ Macromol. Form.  
☐ Cplx. Macromol. Form.

Add new Solution...

Crystallant

Vol:

Add to Drop

asdert  
 qwe  
 wer  
 yyz4810

CombiClover

121	121	131	131	121	121
pH 9.50	pH 9.50	pH 7.50	pH 7.50	pH 9.50	pH 9.50
Wzrd1 1	Wzrd1 1	Wzrd1 2	Wzrd1 2	Wzrd1 3	Wzrd1 3
121	121	131	131	121	121
pH 9.50	pH 9.50	pH 7.50	pH 7.50	pH 9.50	pH 9.50
Wzrd1 1	Wzrd1 1	Wzrd1 2	Wzrd1 2	Wzrd1 3	Wzrd1 3
131	131	121	121	121	121
pH 6.00	pH 6.00	pH 5.50	pH 5.50	pH 4.50	pH 4.50
Wzrd1 7	Wzrd1 7	Wzrd1 8	Wzrd1 8	Wzrd1 9	Wzrd1 9
131	131	121	121	121	121
pH 6.00	pH 6.00	pH 5.50	pH 5.50	pH 4.50	pH 4.50
Wzrd1 7	Wzrd1 7	Wzrd1 8	Wzrd1 8	Wzrd1 9	Wzrd1 9
121	121	131	131	131	131
pH 6.50	pH 6.50	pH 6.50	pH 6.50	pH 8.00	pH 8.00
Wzrd1 13	Wzrd1 13	Wzrd1 14	Wzrd1 14	Wzrd1 15	Wzrd1 15
121	121	131	131	131	131
pH 6.50	pH 6.50	pH 6.50	pH 6.50	pH 8.00	pH 8.00
Wzrd1 13	Wzrd1 13	Wzrd1 14	Wzrd1 14	Wzrd1 15	Wzrd1 15

3802

Volume	Name
2.00 µl	yyz4810
2.00 µl	Crystallant

Move Up

Move Down

Delete

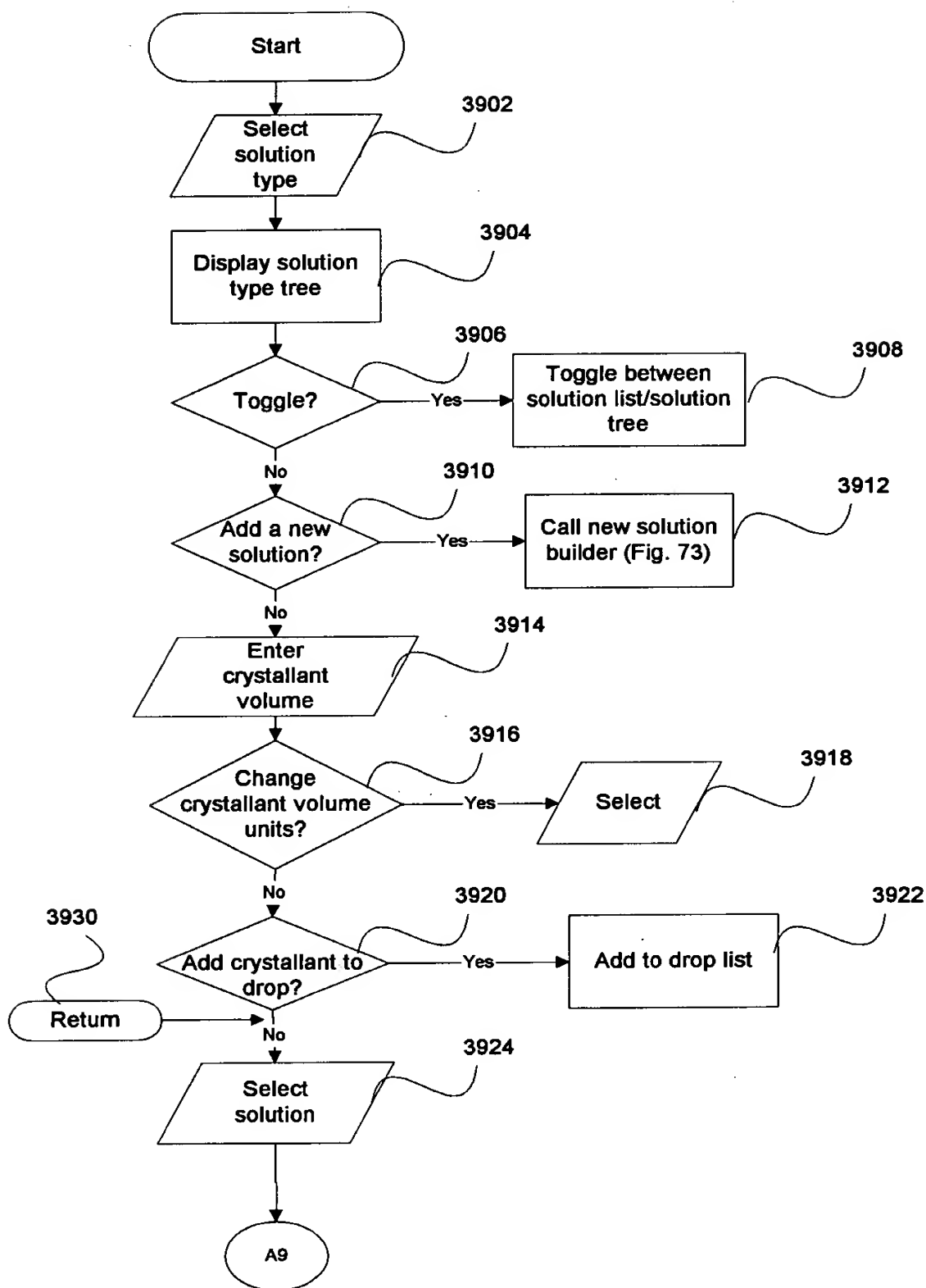
Transfer Drop to sel. Wells

< Back    Next >    Cancel    Help

3804    3806    3808    3810

Fig. 38

002080" 587E960



Draft  
flow4.vsd  
8/1/00 (11:22:28 AM)

FIGURE 39

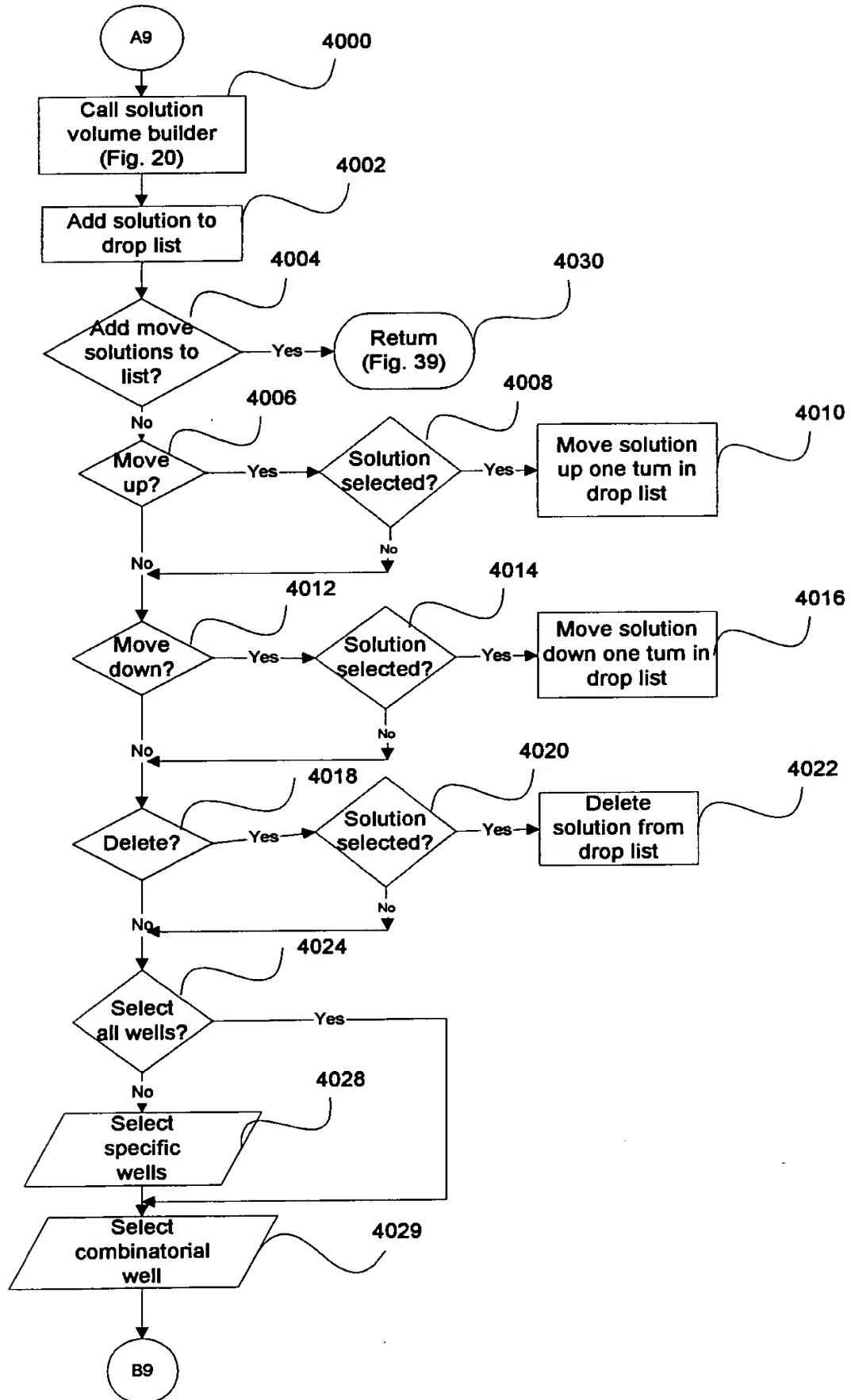


FIGURE 40

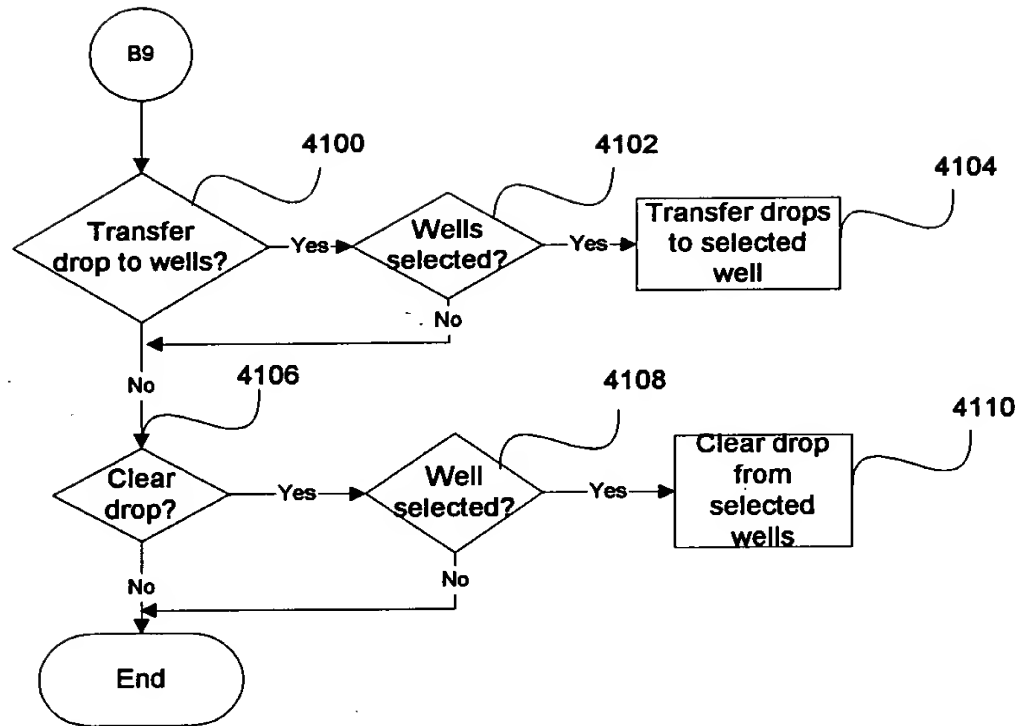


FIGURE 41

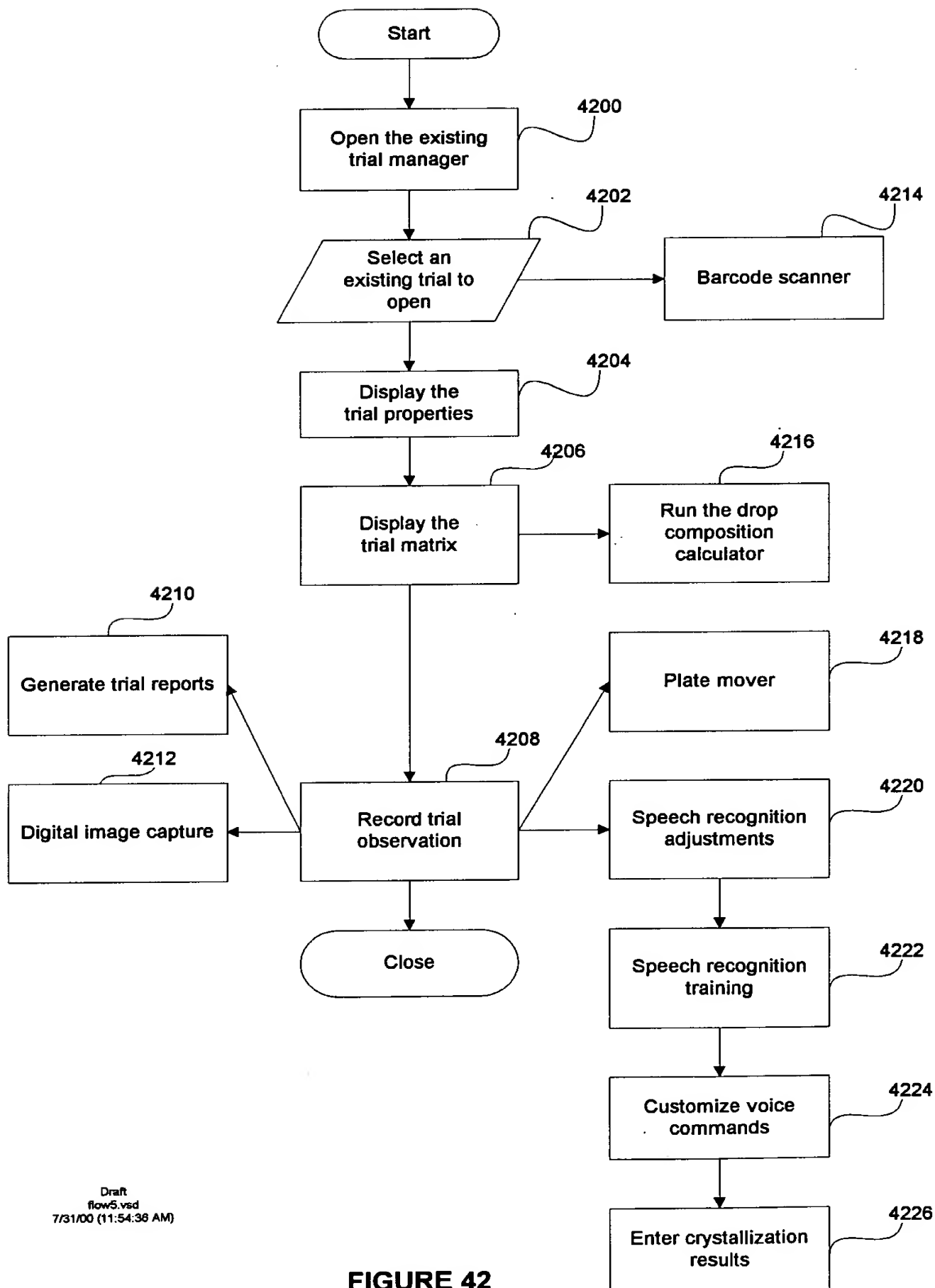


FIGURE 42

002080" GETFE60



4304 4300 4302 4306 4308

Open Trial

From: Tuesday, January 04, 2000 Until: Tuesday, April 04, 2000 Query!

TrialID	TrialType	ObservationSessions	UserName	SetupDate	ProjectName	Tempe
5	Complex	0	Admin	4/3/2000 17:...	ijprotein	25 C
4	Complex	0	Admin	4/3/2000 16:...	ijprotein	25 C
3	Normal	0	Admin	4/3/2000 16:...	test	25 C
2	Normal	1	Admin	4/3/2000 11:...	test	25 C
1	Normal	2	Admin	3/22/2000 1:...	test	25 C

4310 4301

Select one or more trials and click OK or use barcode reader to load a trial. The barcode reader is activated as long as this dialog is active.

Open

4312 4314 4316

5 Trial(s) have been created between the specified dates.

FIG. 43



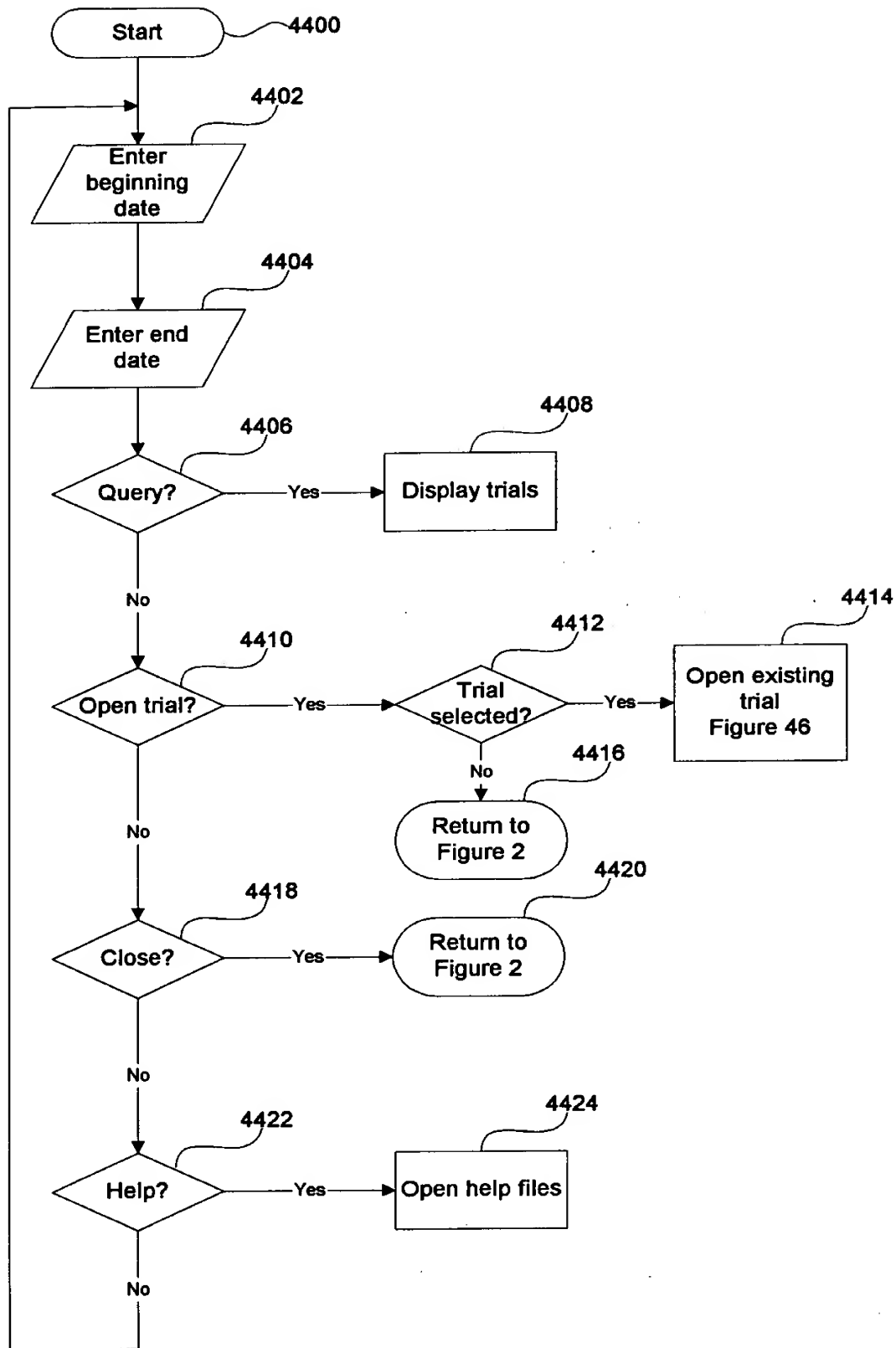


FIGURE 44

002030" 58T'E960

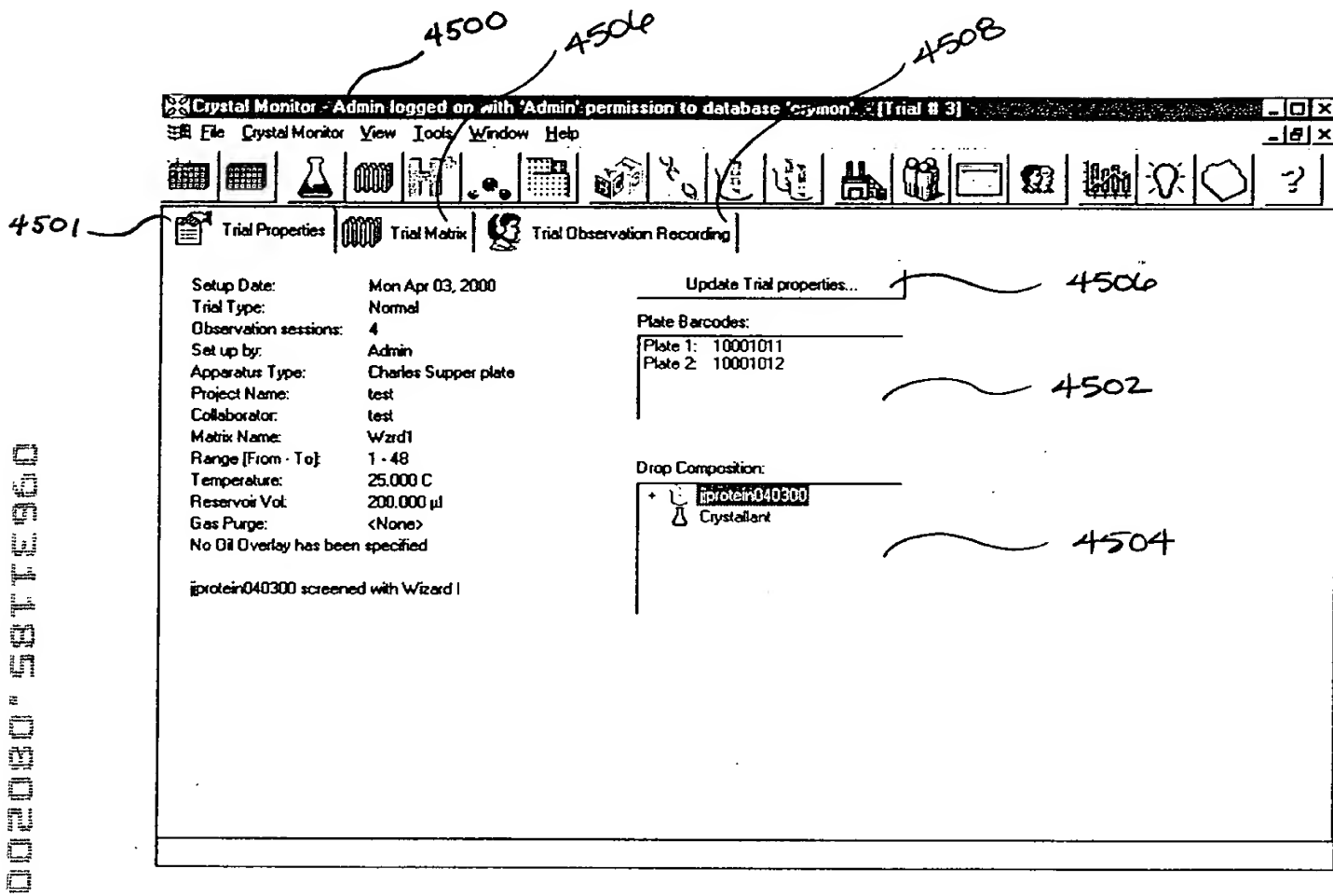


FIG. 45

09631185.080200

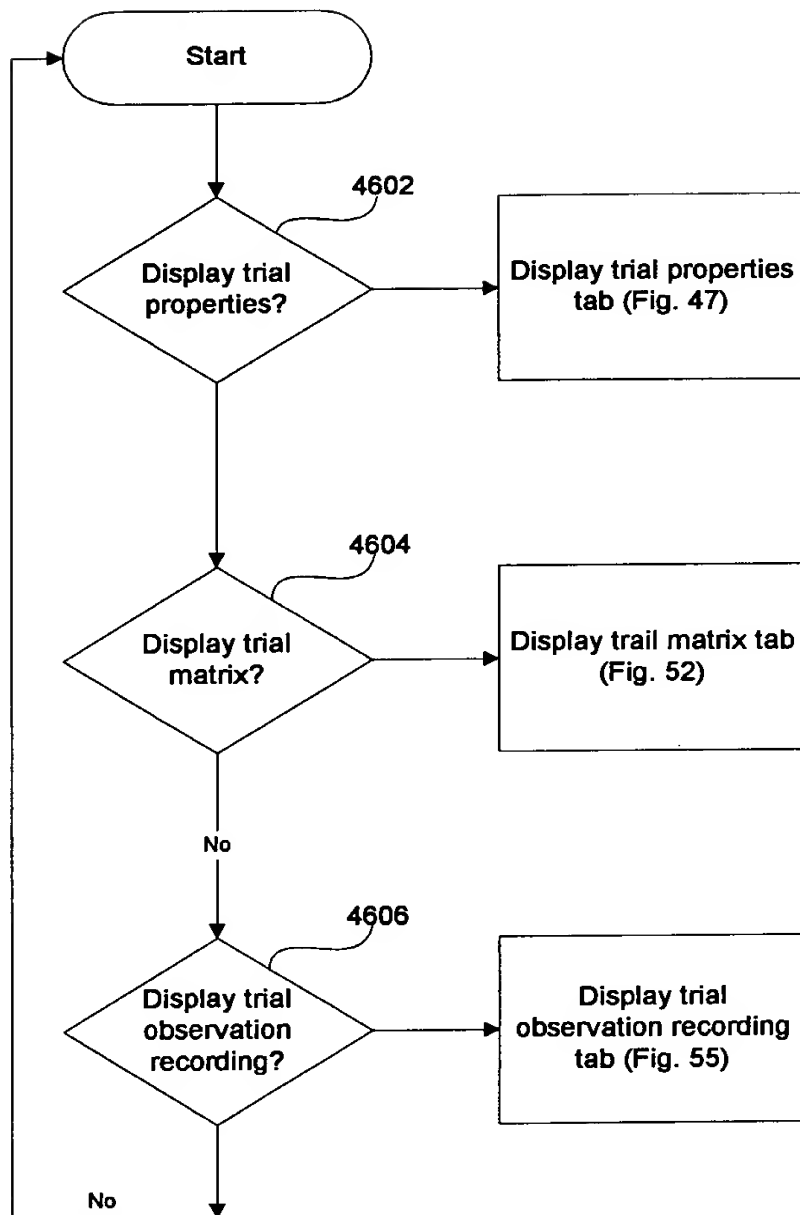


FIGURE 46

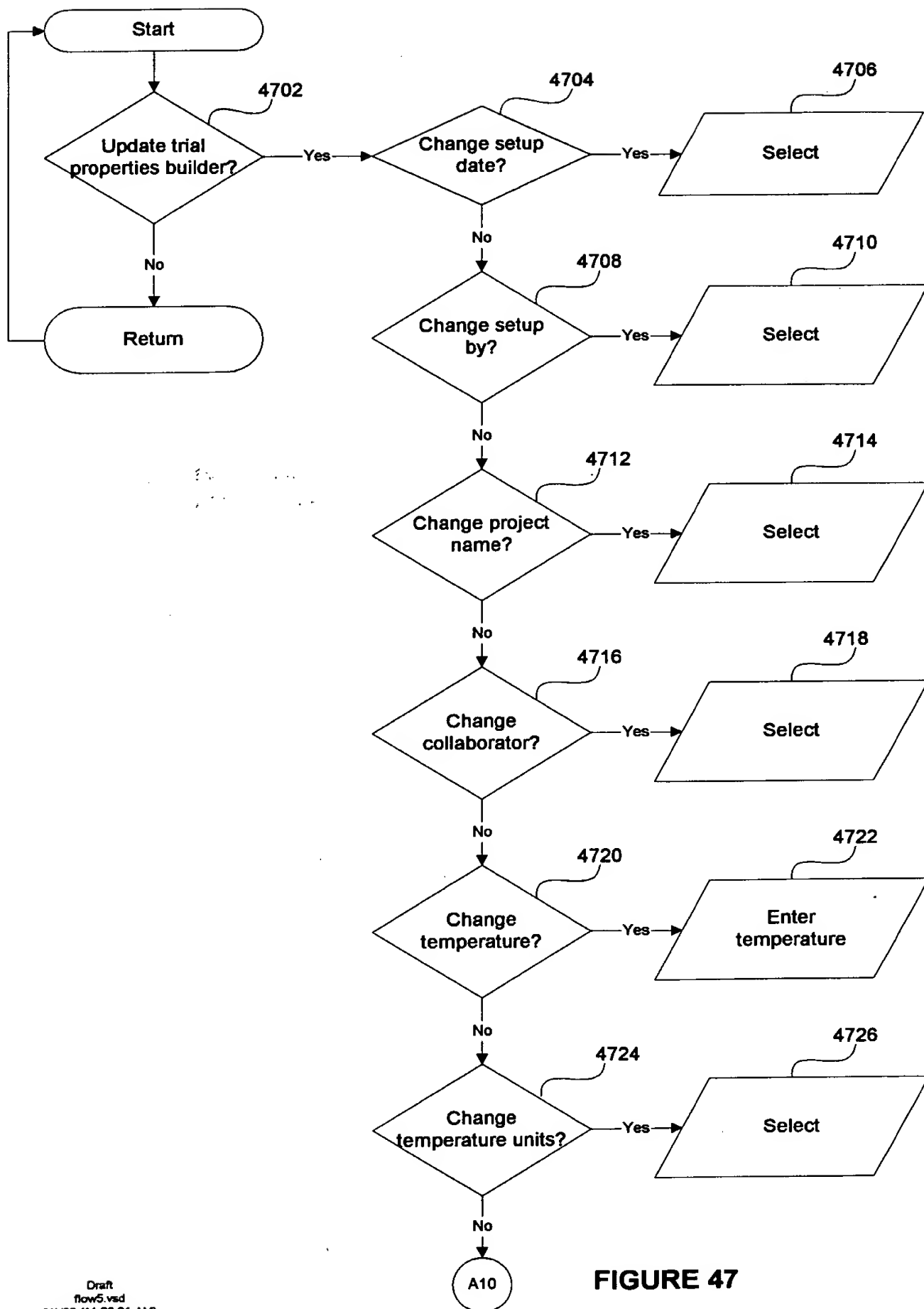


FIGURE 47

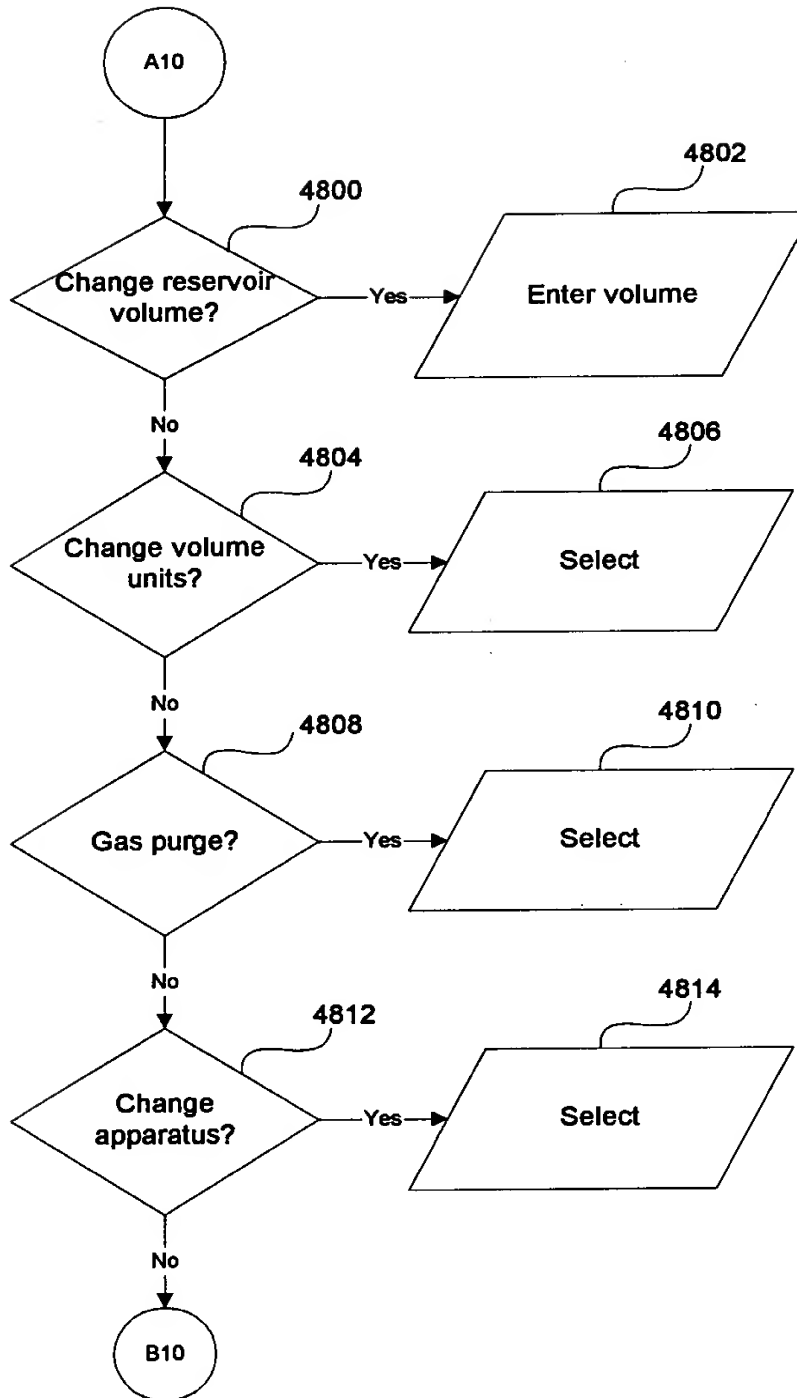


FIGURE 48

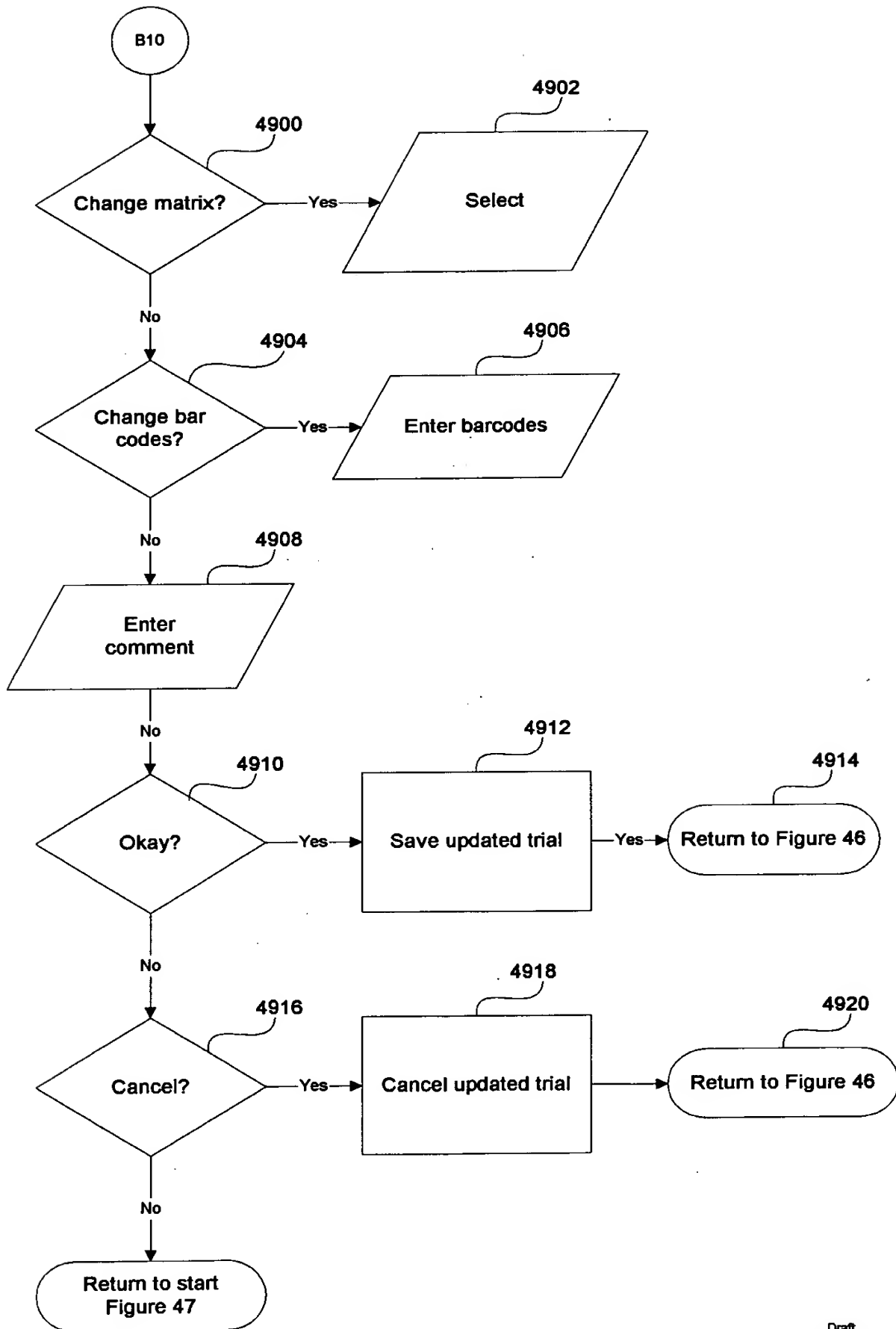


FIGURE 49

002030 " 5BT E 560

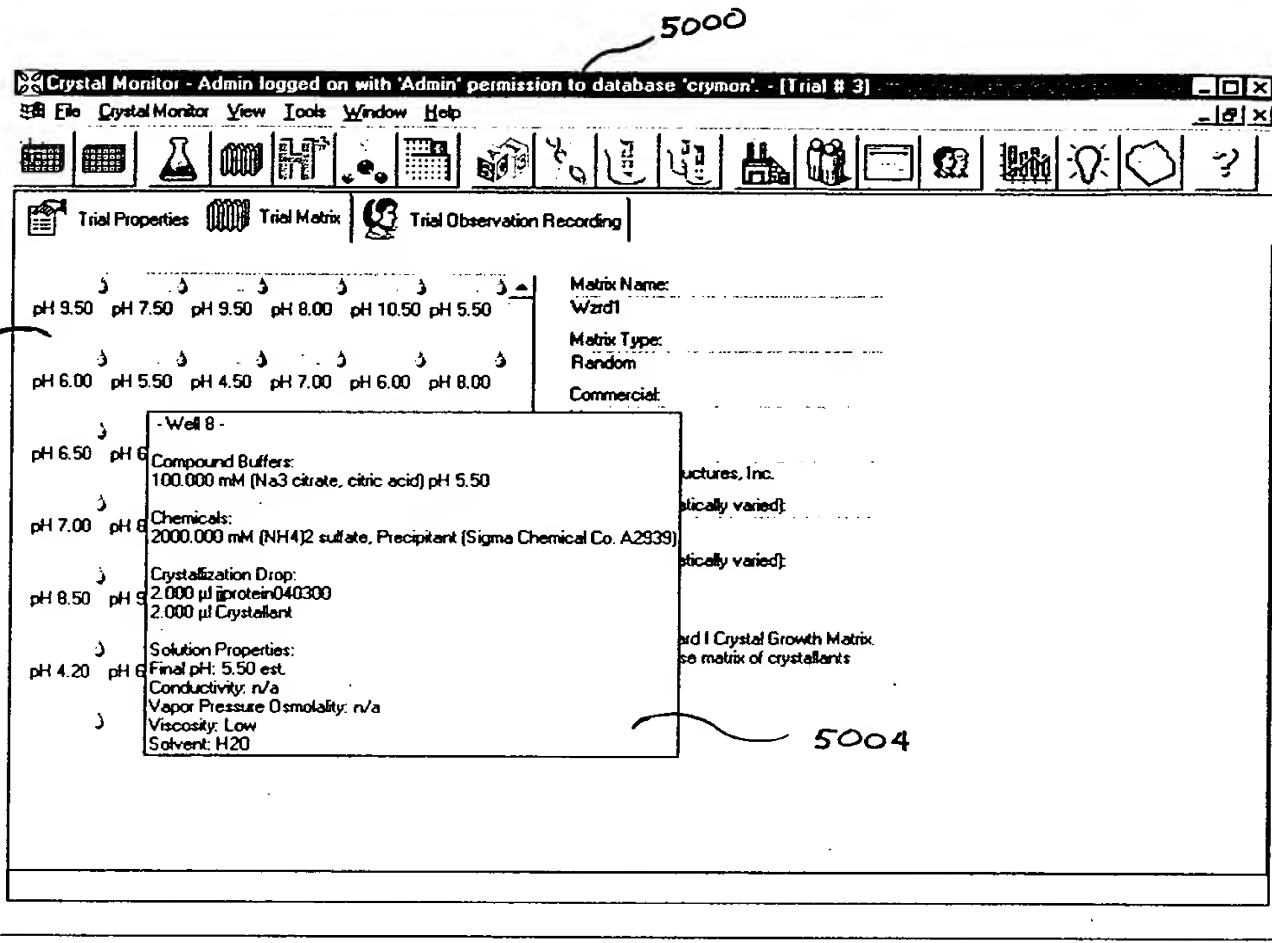


Fig. 50

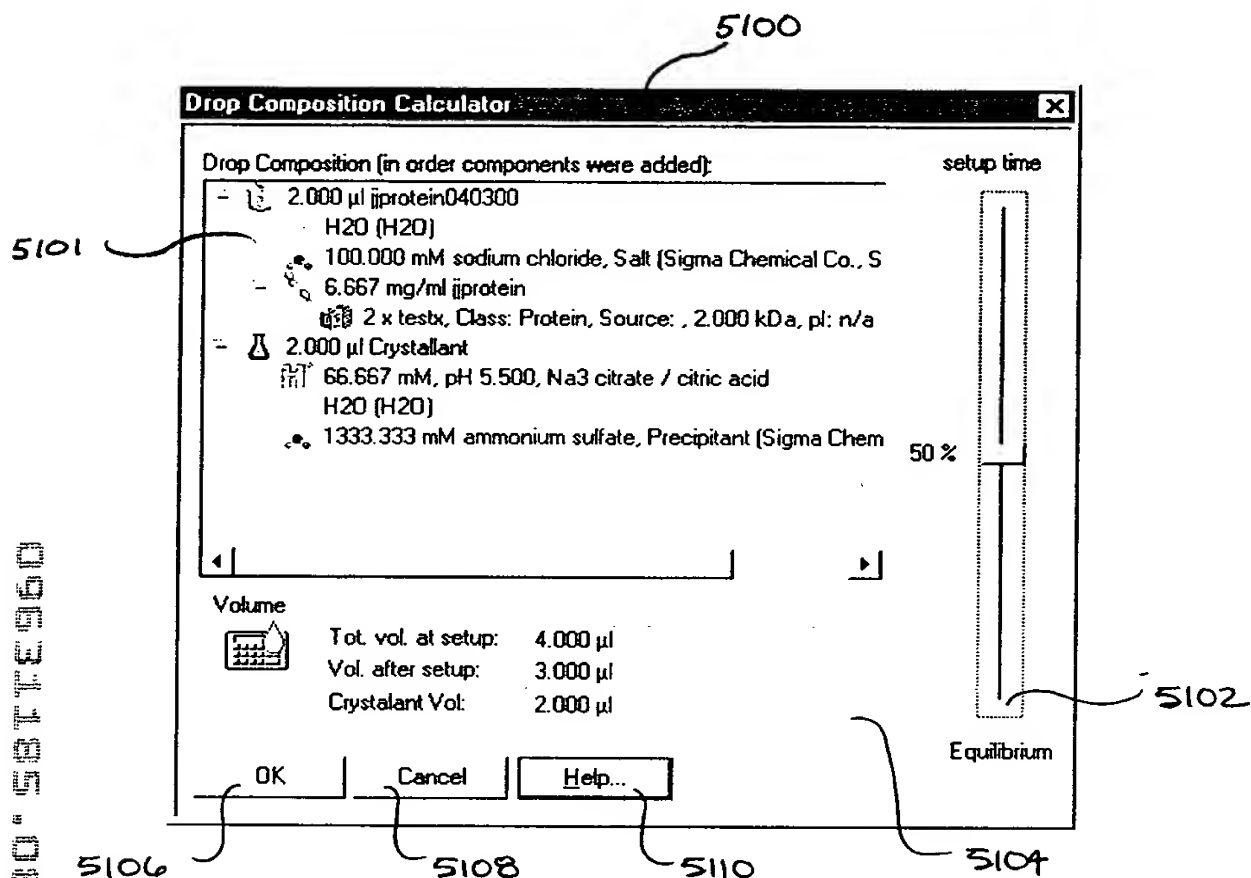


Fig. 51



002090" SITE 360

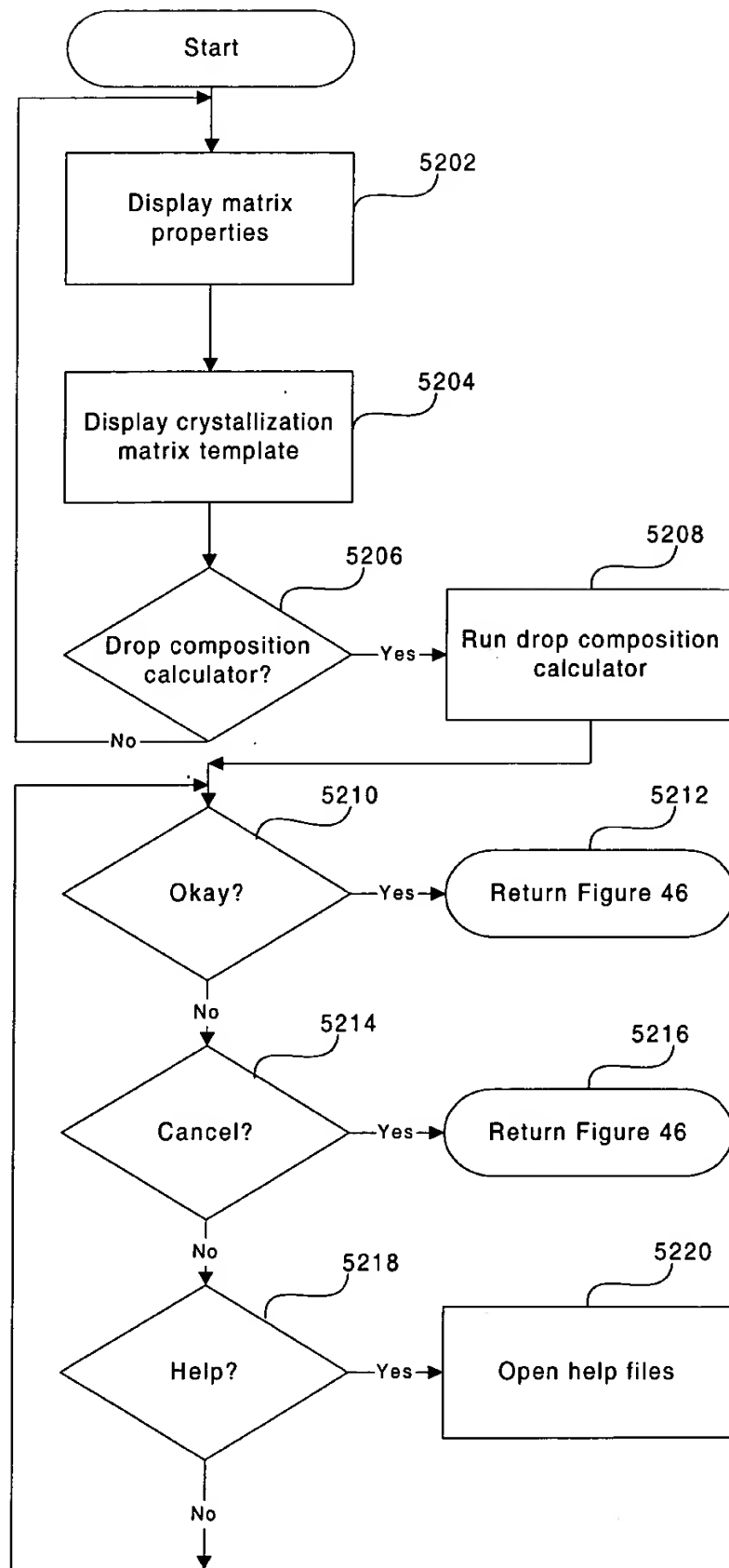


FIGURE 52

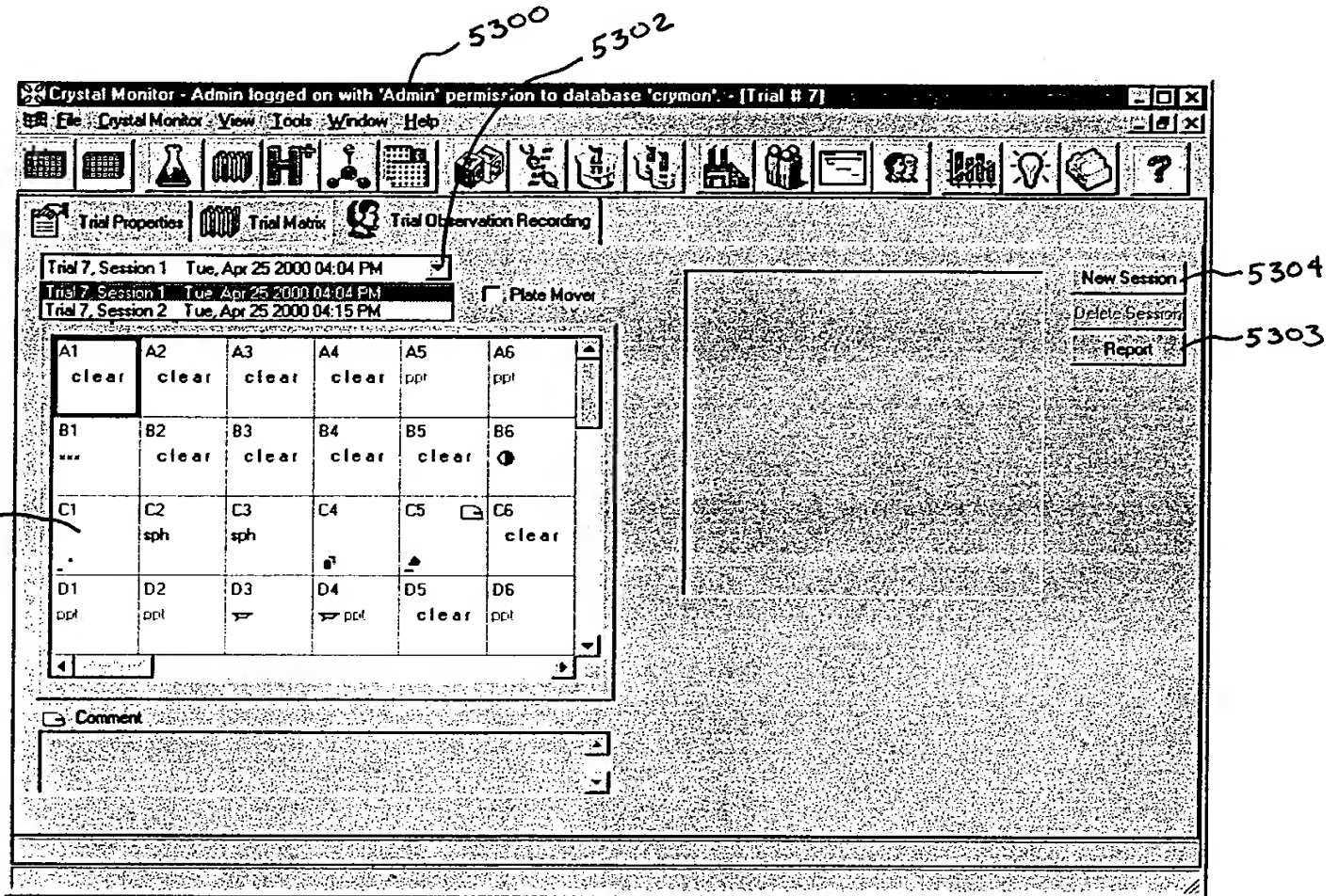


FIG. 53

002080"58TTE960

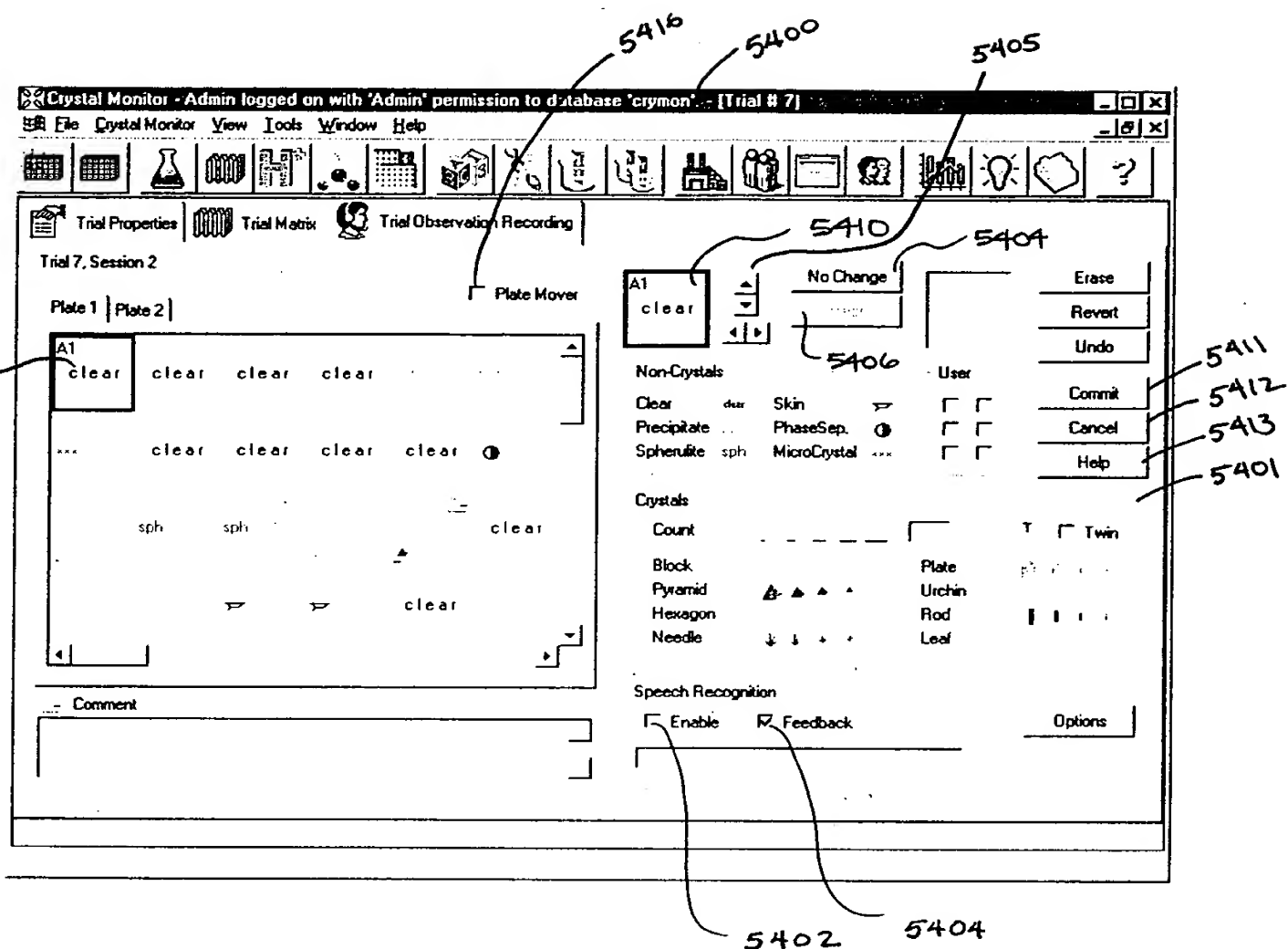


Fig. 54

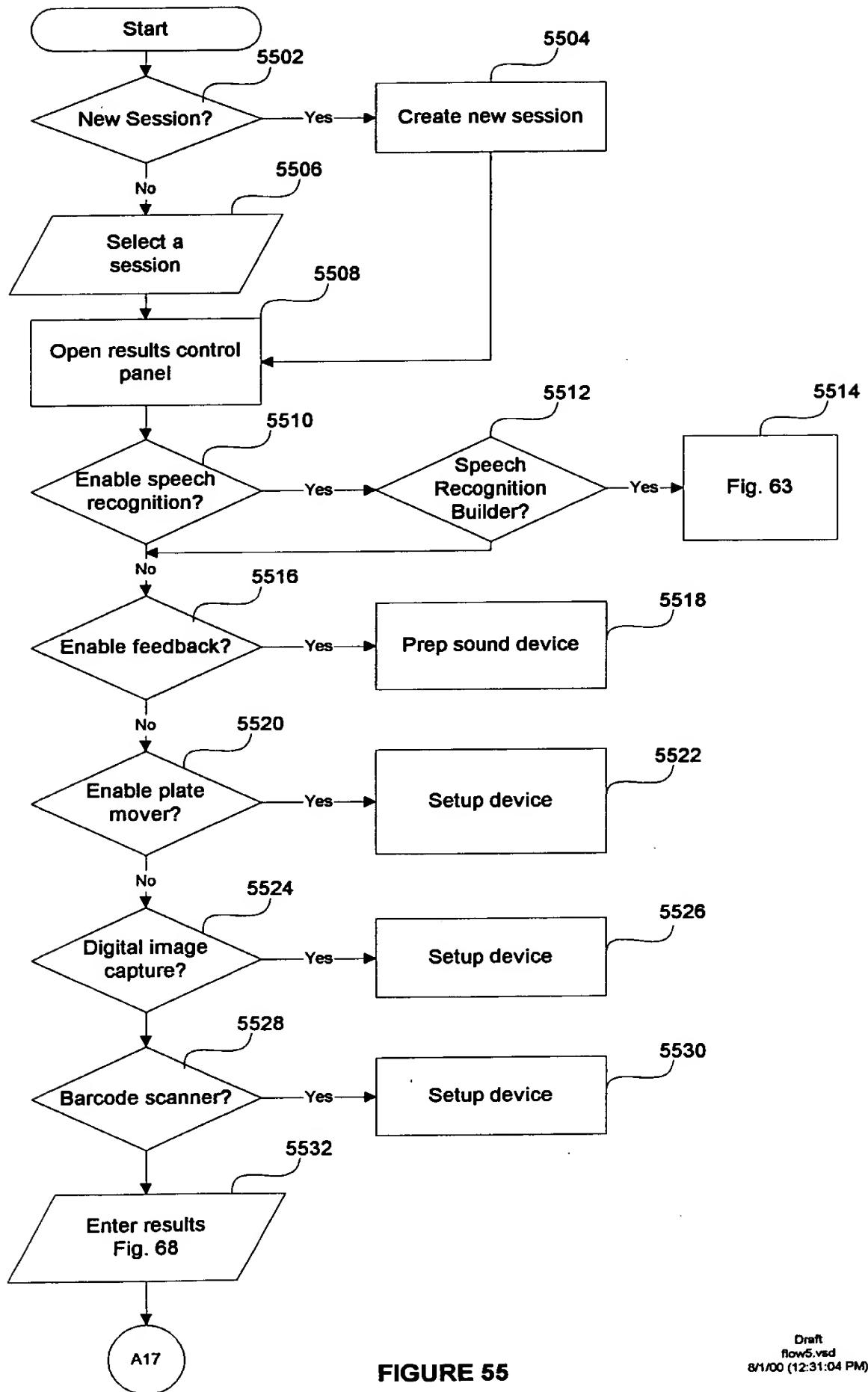


FIGURE 55

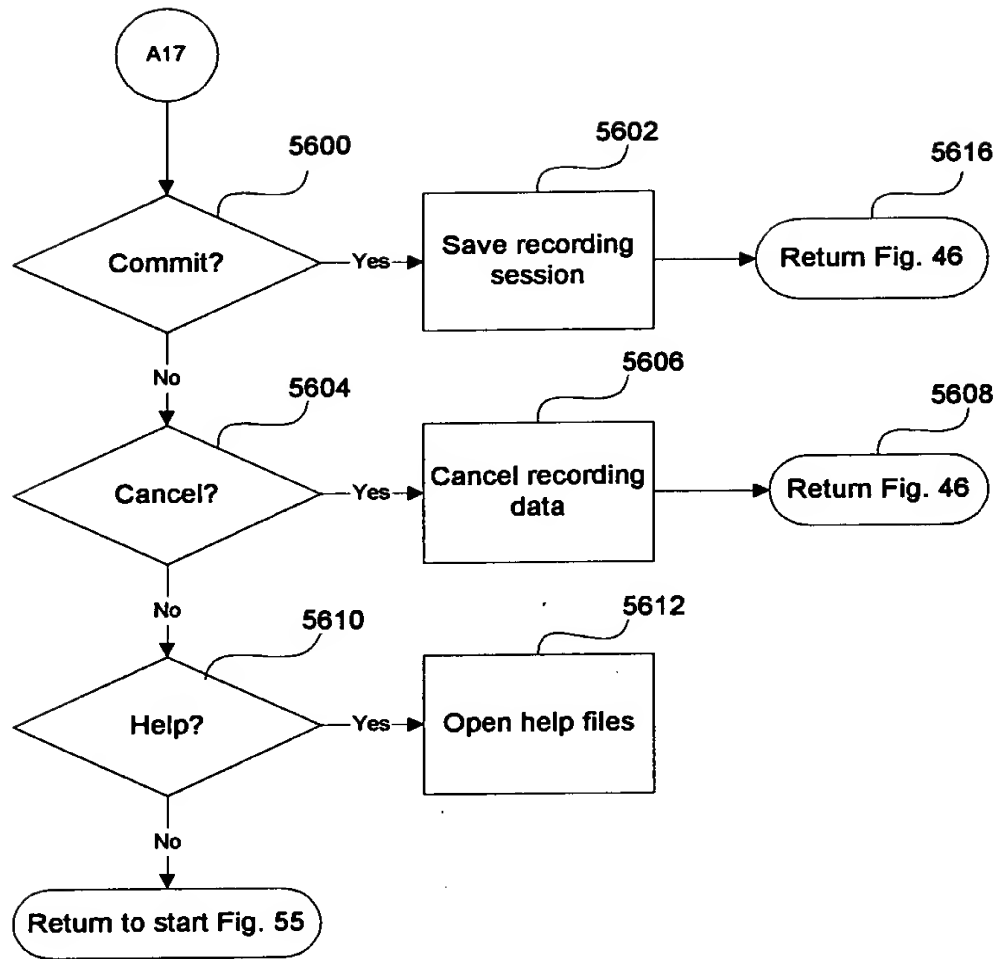
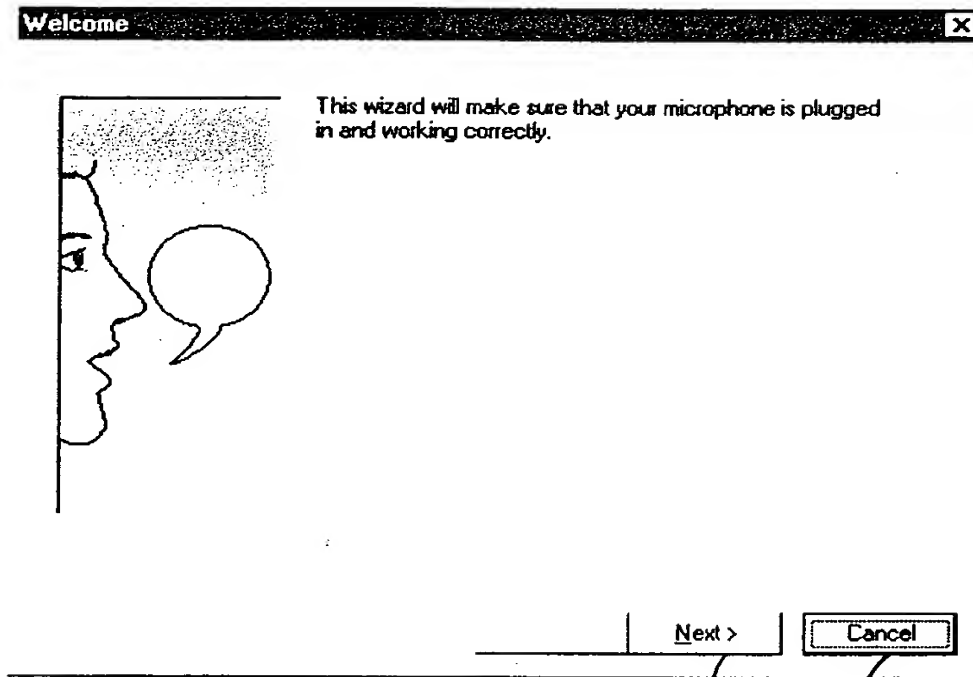


FIGURE 56



← 5700

Fig. 57

5702

5704

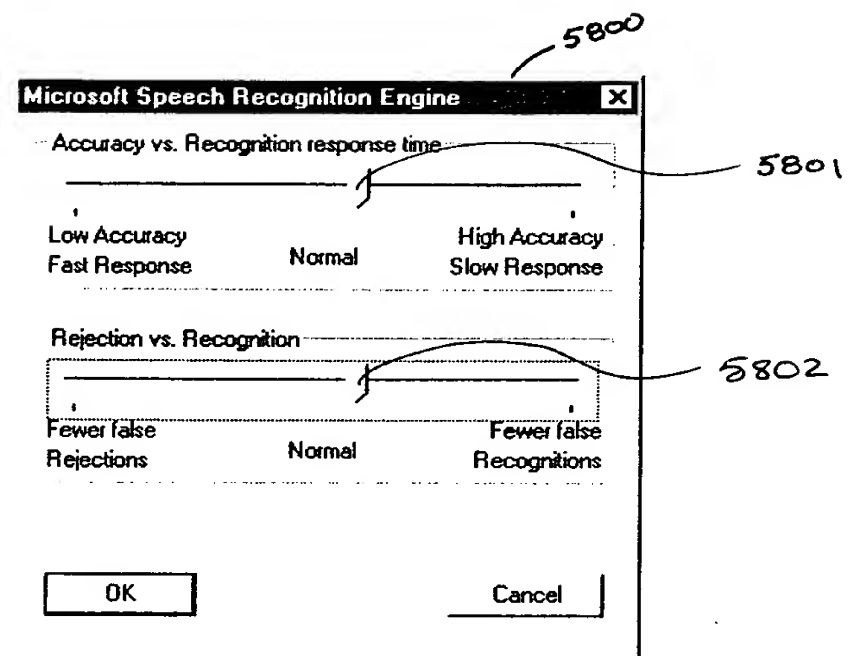


Fig. 58

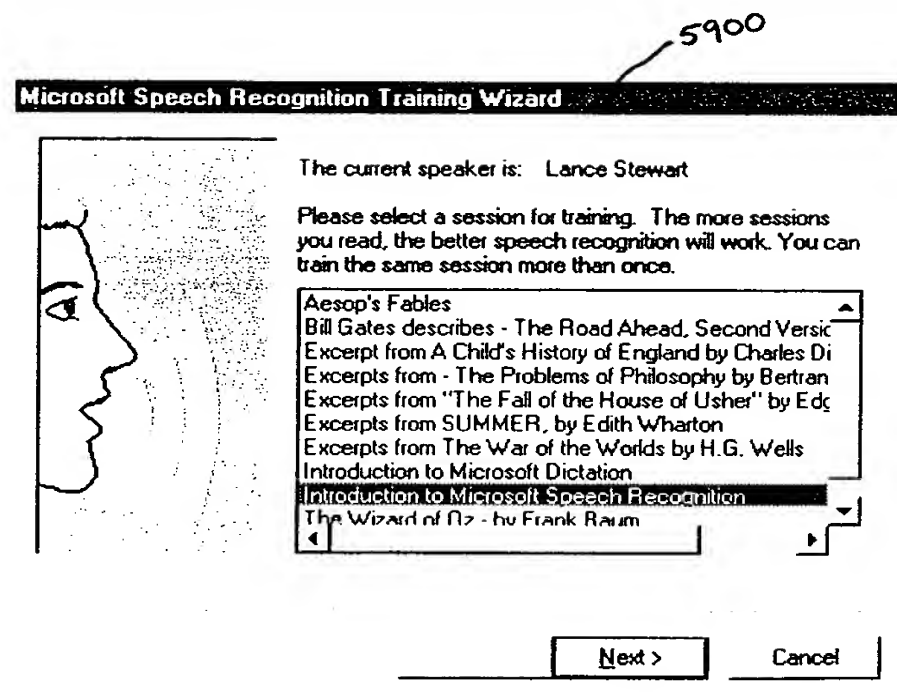


Fig. 59

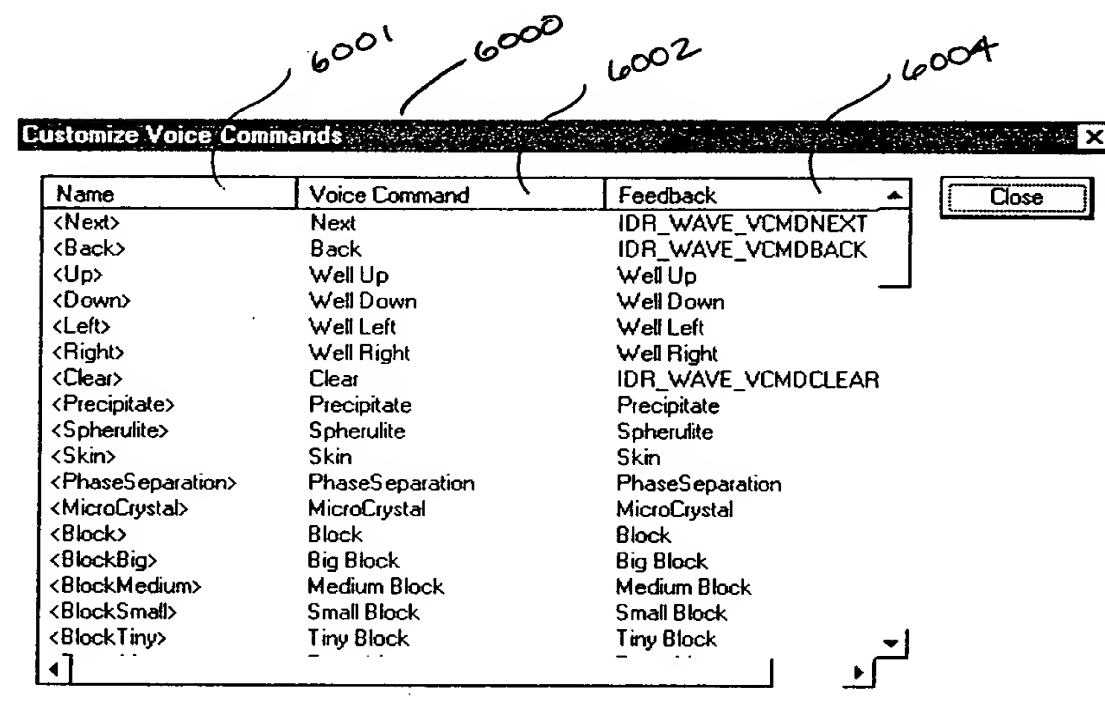


Fig. 60



6100

6101

Voice Command X

Name <Clear>

Voice Command Clear 6102

Feedback IDR\_WAVE\_VCMDCLEAR 6104

OK 6105

Cancel 6106

Fig. 61

0963185, 030200

6200

**Customize Voice Commands**
✕

Name	Voice Command	Feedback
<Down>	Well Down	Well Down
<Left>	Well Left	Well Left
<Right>	Well Right	Well Right
<FirstWell>	First Well	First Well
<LastWell>	Last Well	Last Well
<Clear>	clear	IDR_WAVE_VCMDCLEAR
<Precipitate>	Precipitate	Precipitate
<Spherulite>	Spherulite	Spherulite
<Skin>	Skin	Skin
<PhaseSeparation>	PhaseSeparation	PhaseSeparation
<MicroCrystal>	MicroCrystal	MicroCrystal
<User1>	flocculent	flocculent
<User2>	heavy	heavy
<User3>	granular	granular
<Block>	Block	Block
<BlockBig>	Big Block	Big Block
<BlockMedium>	Medium Block	Medium Block

Close

Edit...

FIG. 62

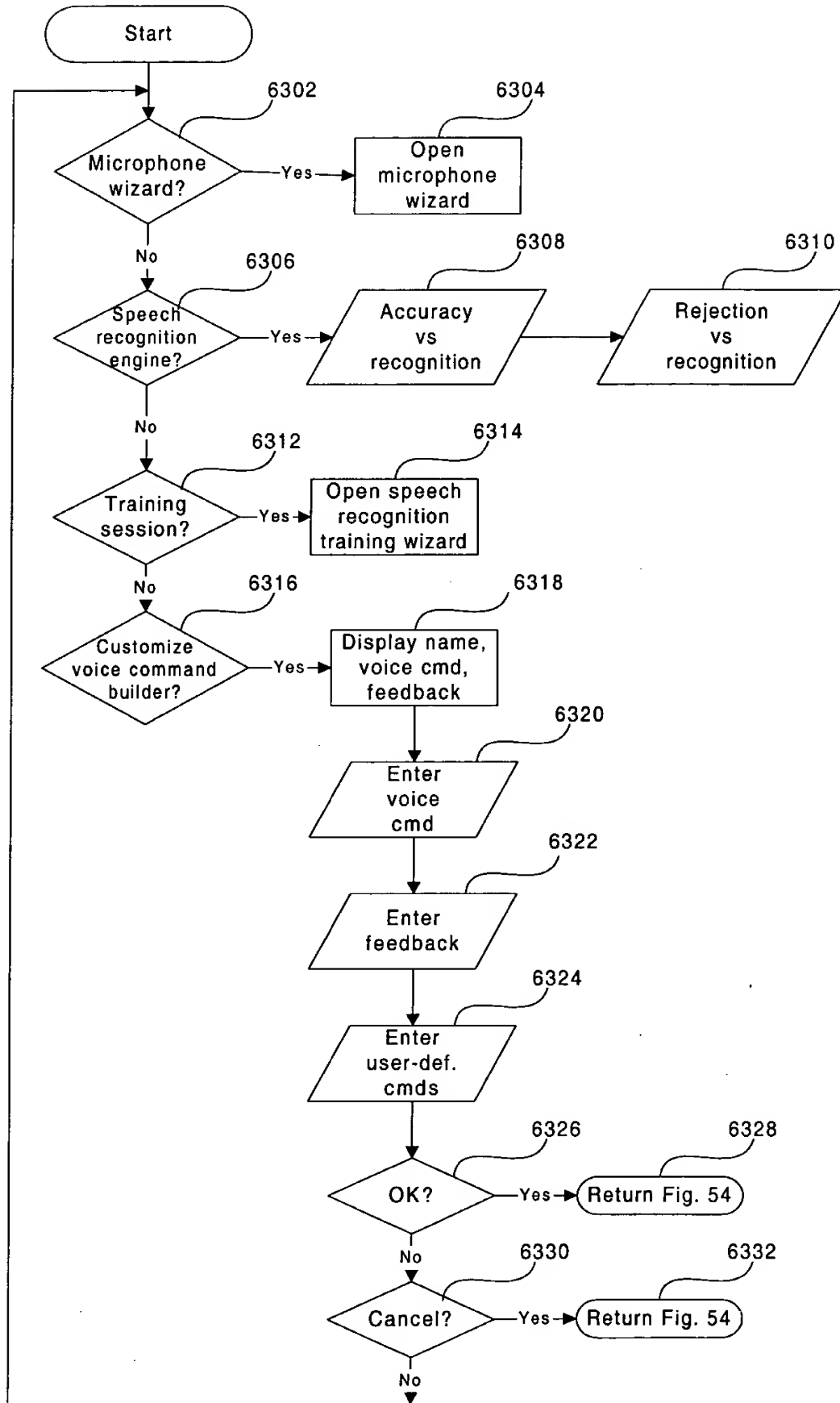


FIGURE 63

002080"58TTE960

Options

Barcode Reader | Plate Mover | Miscellaneous

COM PORT: COM1

Baud: 9600 (def)

Stop Bits: ☒ 1 (default) ☐ 2

Parity: ☒ None (default) ☐ Even ☐ Odd

Testing: ☒ Plate Mover ON for Testing

Command: p 0 0 0

Response:

Run

Align Co-ordinates

Set Defaults

OK Cancel

6402 FIG. 64

002090"58TE950

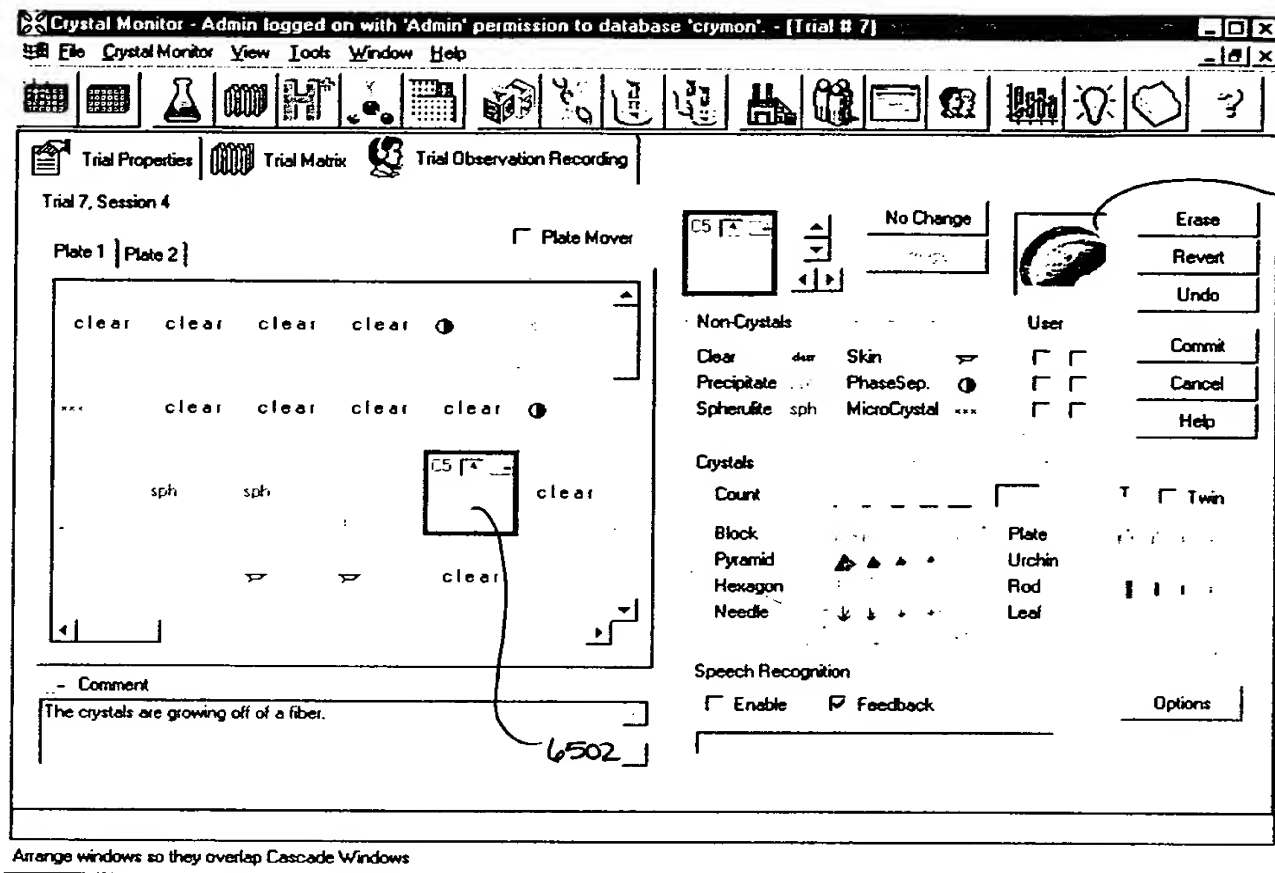


FIG. 65

002090 "5877E960

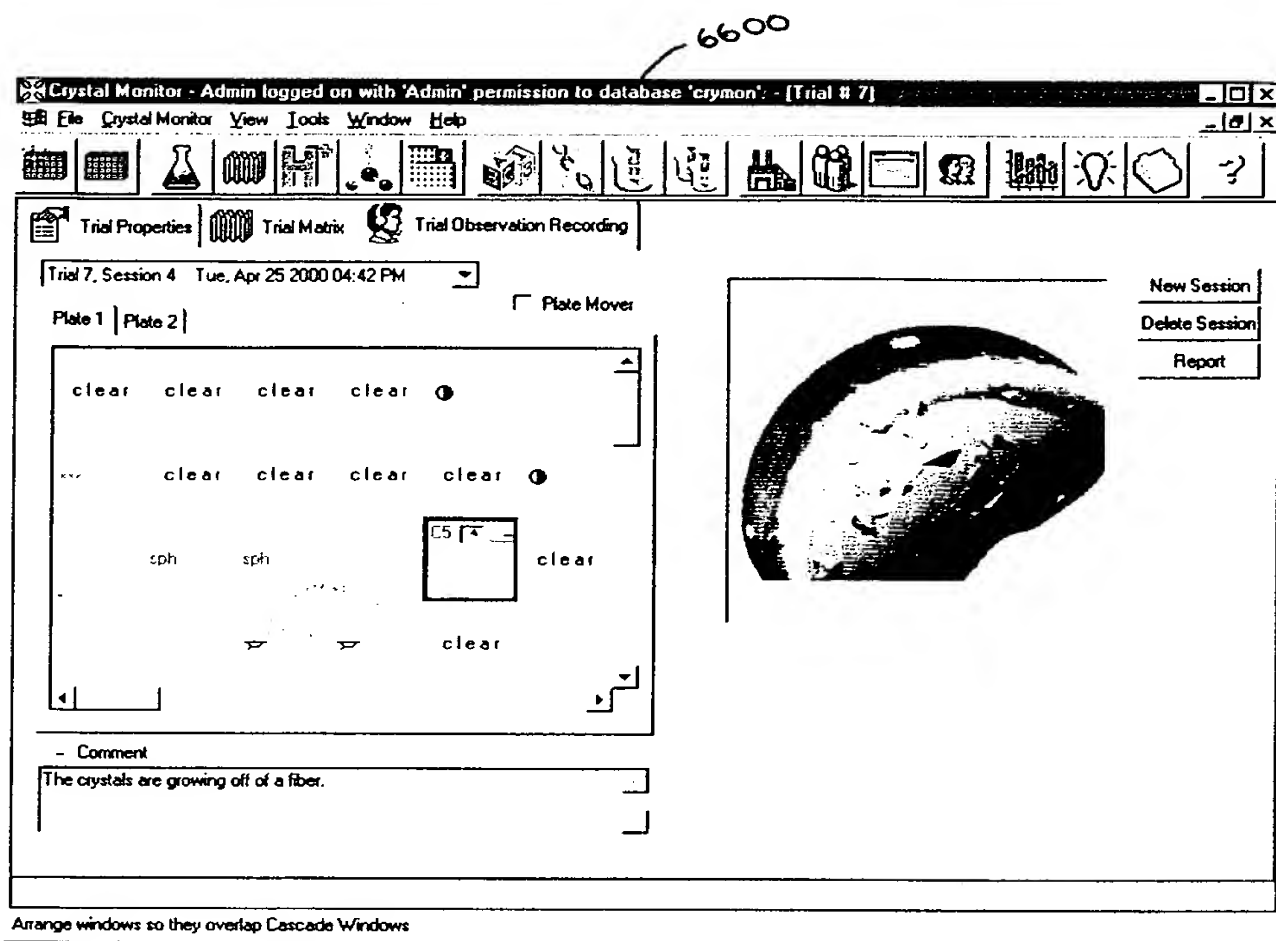


FIG. 66

002080 587E960 09631185 080200

6700

Options

Barcode Reader

Plate Mover

Miscellaneous

COM PORT

COM1

Baud

9600 (def)

Stop Bits

☒ 1 (default)

☐ 2

Parity

☒ None (default)

☐ Even

☐ Odd

Testing

☒ Barcode Reader ON for Testing

Scanned Barcode:

Set Defaults

OK

Cancel

Fig. 67

002020" 587E960

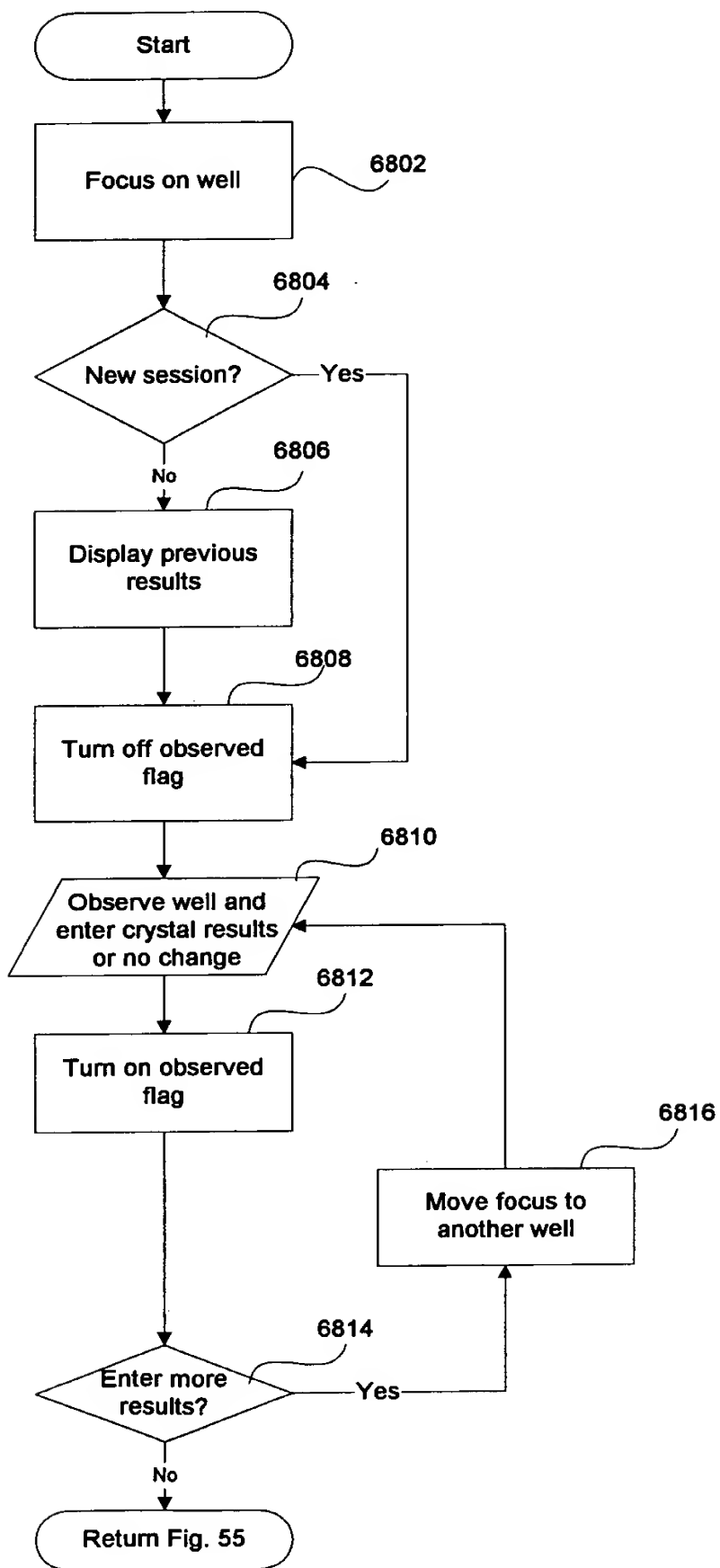


FIGURE 68



09631185 080200

clear clear clear clear ①  
xxx clear clear clear clear ①  
sph sph 05 ① clear  
clear

Fig. 69

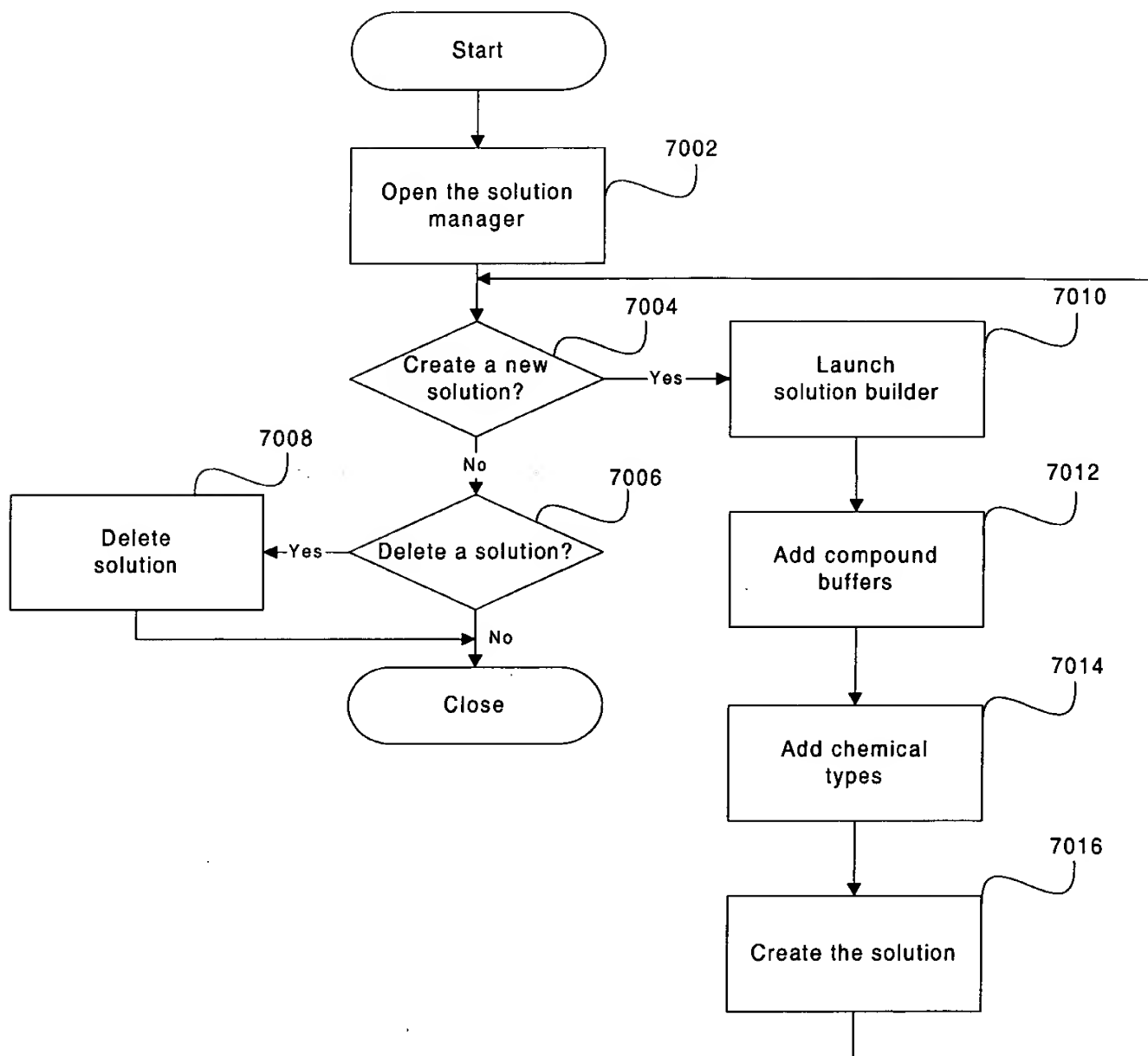


FIGURE 70

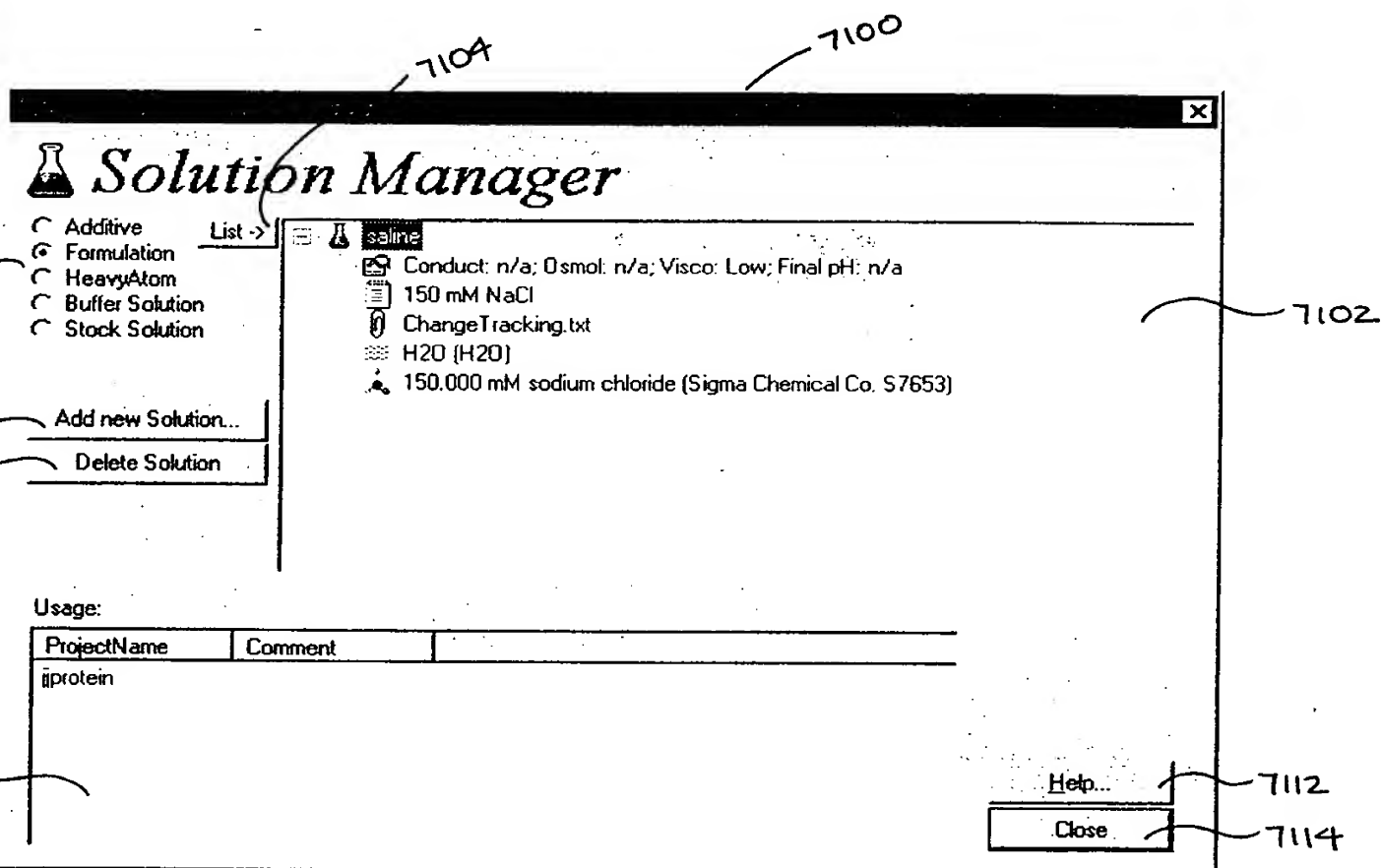


Fig. 71

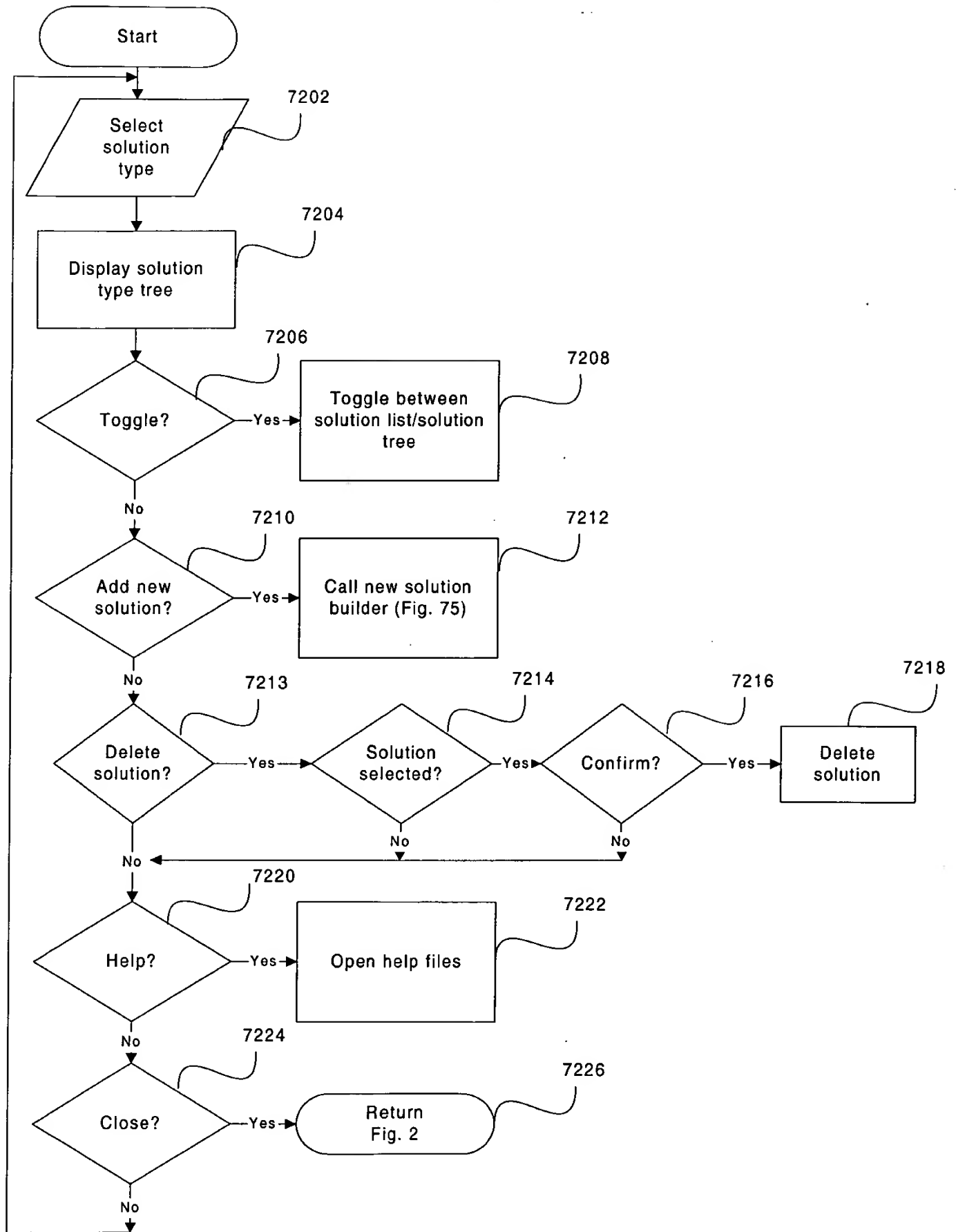


FIGURE 72

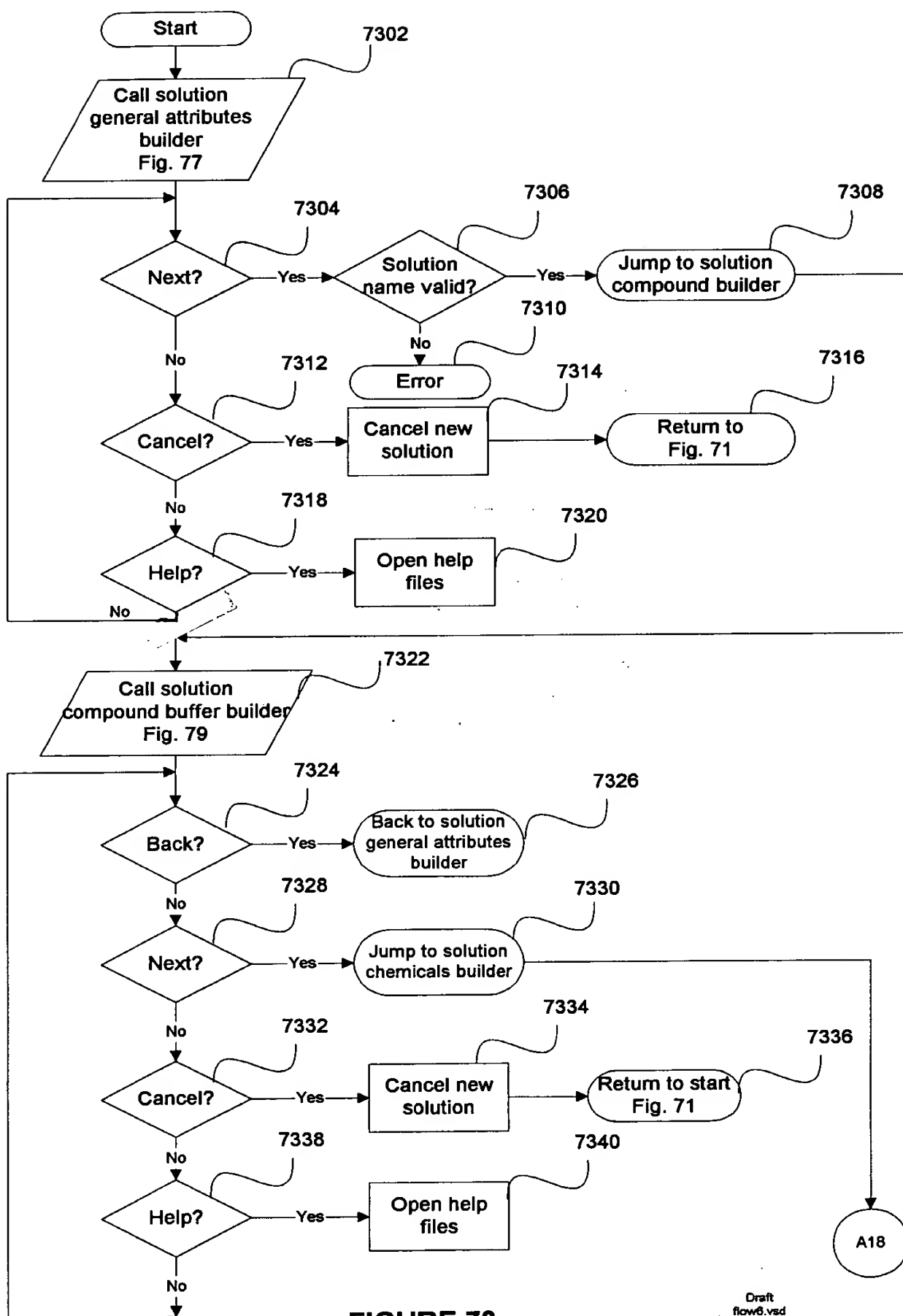


FIGURE 73

09631165-080200

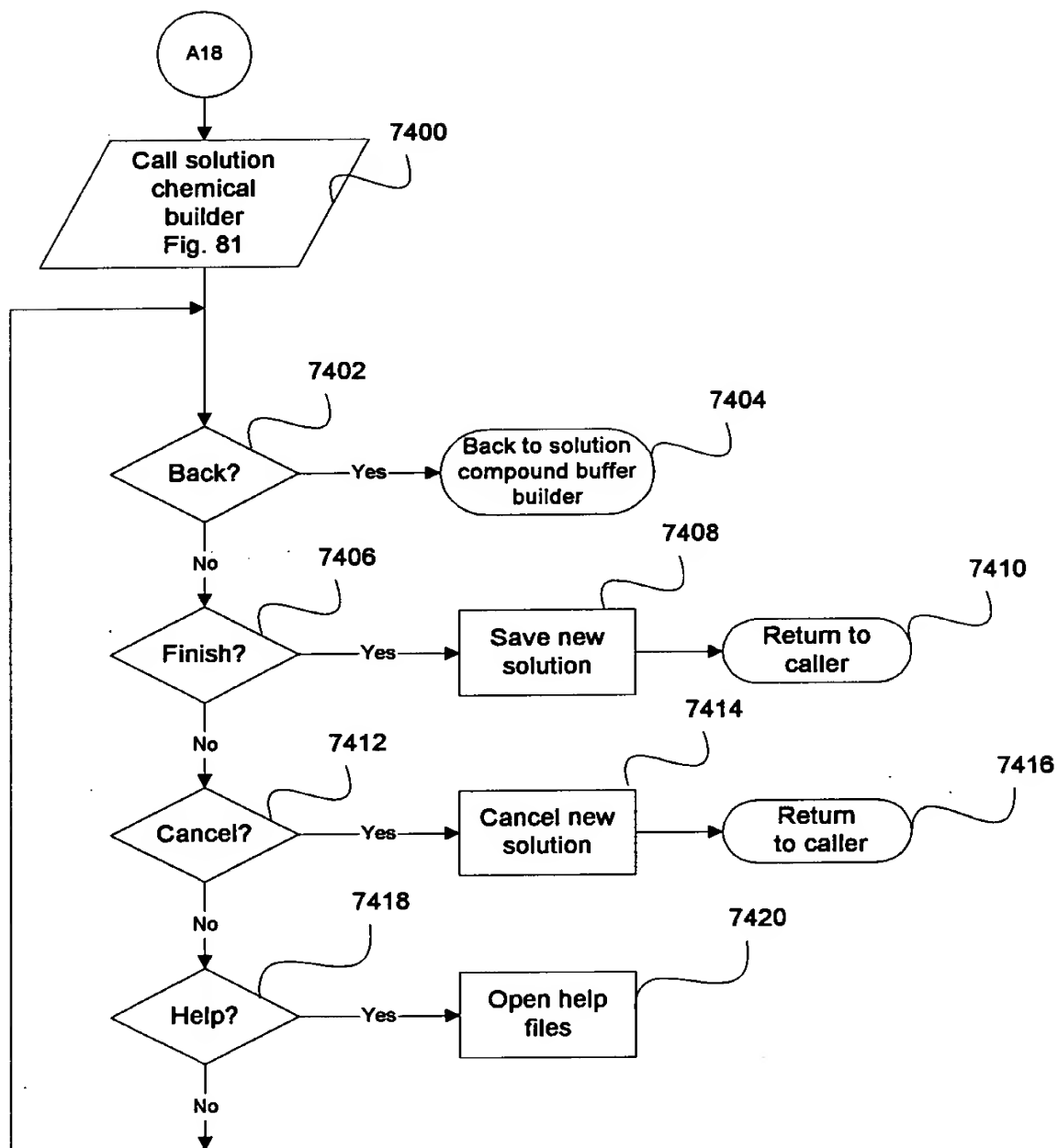


FIGURE 74

**Solution Wizard - General**

**Solution Type**

- ☐ Additive
- ☒ Formulation
- ☐ Heavy Atom
- ☐ Buffer Solution
- ☐ Stock Solution

**pH of Solution**

- ☒ Estimated
- ☐ Measured

**Viscosity**

- ☒ Low
- ☐ High

**Solution Attributes**

pH of Solution:

Vapor Pressure Osmolality:  mmole/kg

Conductivity:   $\mu\text{S}/\text{cm}$

Solvent:  H2O (Mothel)

Solution Name:  ammsulf040400

**Comment:**

200 mM ammonium sulfate 100 mM Tris pH 7.0

**Buttons:** < Back, Next >, Cancel, Help

**Image:** E:\crymon\Help\crystalmonitor\images\attac

Fig. 75

002080" 5877E960

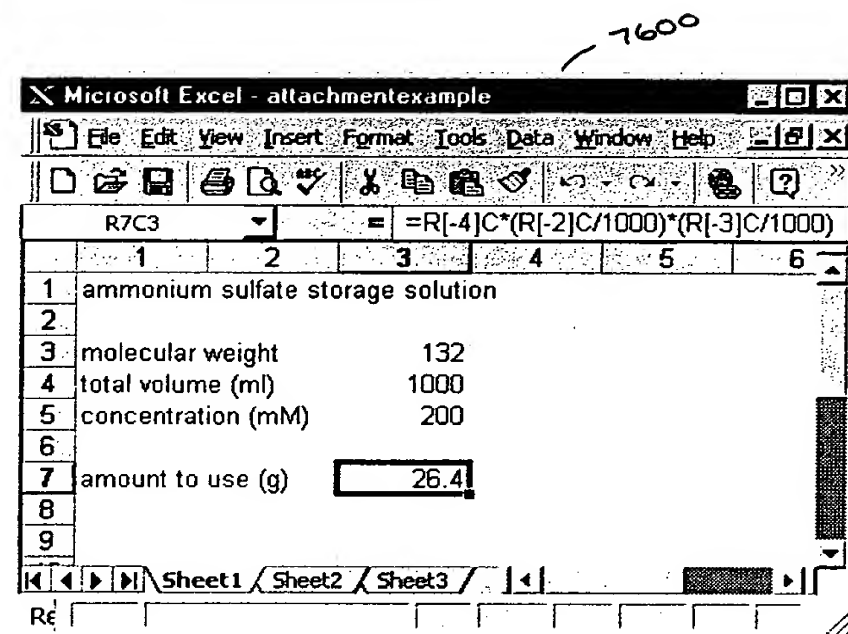


Fig. 76



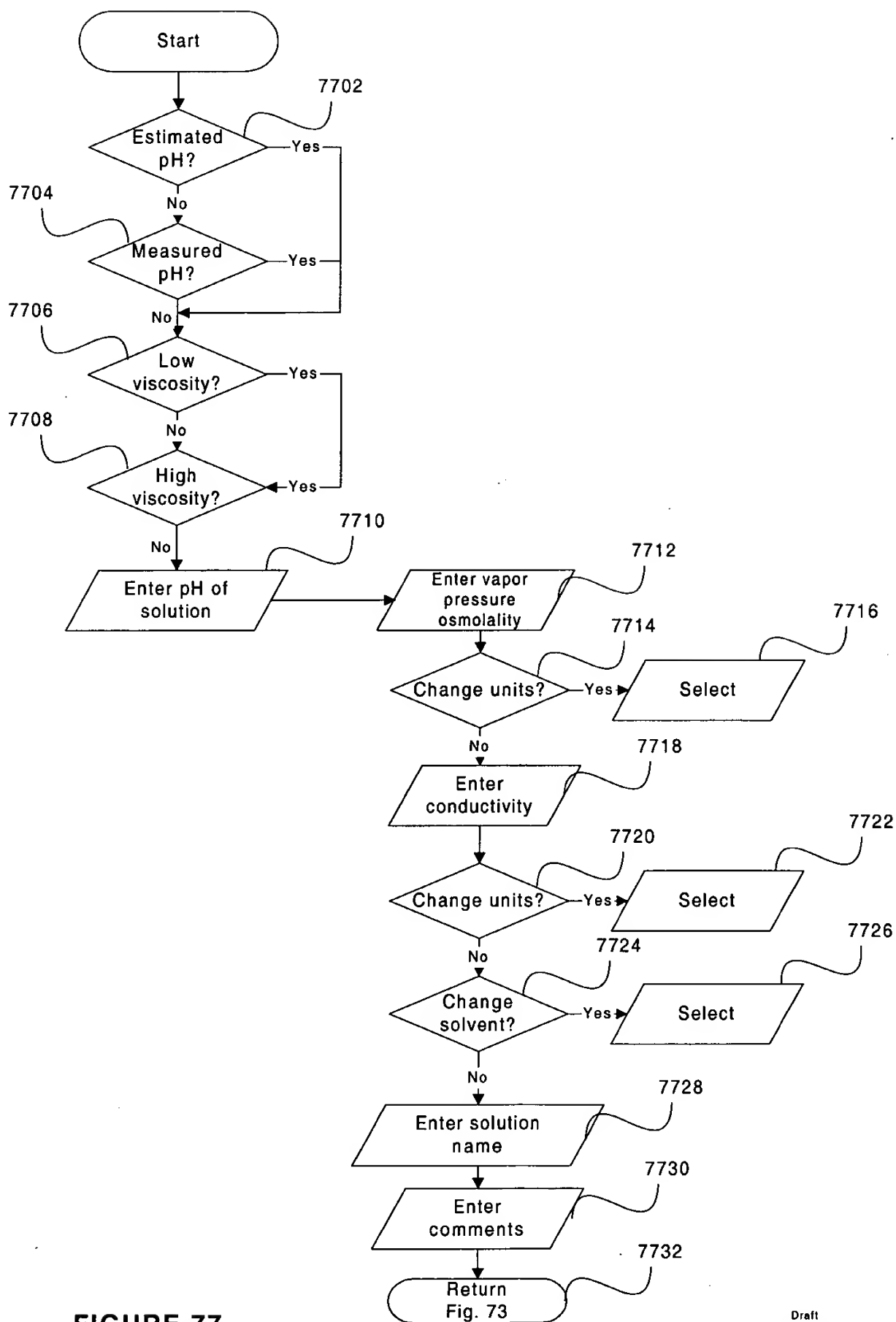


FIGURE 77

7800

Formulation: ammsulf040400

Compound Buffer Source List:

Buffer PH	Buffering Agent	pH Conjugate	Comme
6.50	sodium cacodylic acid trihydr...	hydrochloric acid (HCl)	Na cac
6.50	2-morpholinoethanesulfonic a...	sodium hydroxide (NaOH)	MES-N
7.00	1,3-diaza-2,4-cyclopentadien...	hydrochloric acid (HCl)	imidazc
7.00	sodium cacodylic acid trihydr...	hydrochloric acid (HCl)	Na cac
7.00	4-(2-hydroxyethyl)piperazine-1...	sodium hydroxide (NaOH)	HEPES
7.00	tris(hydroxymethyl)aminometh...	hydrochloric acid (HCl)	Tris-HCl
7.50	N-(2-hydroxyethyl)piperazine...	sodium hydroxide (NaOH)	HEPES
7.50	4-(2-hydroxyethyl)piperazine-1...	sodium hydroxide (NaOH)	HEPES

Solution Buffer List:

Buffer PH	Concentration	Buffering Agent	pH Conjugate	Commer
7.00	100.000 mM	tris(hydroxymethyl)am...	hydrochloric acid (HCl)	Tris-HCl

< Back   Next >   Cancel   Help

7808   7810   7812   7814

Fig. 78

002080" SET 960

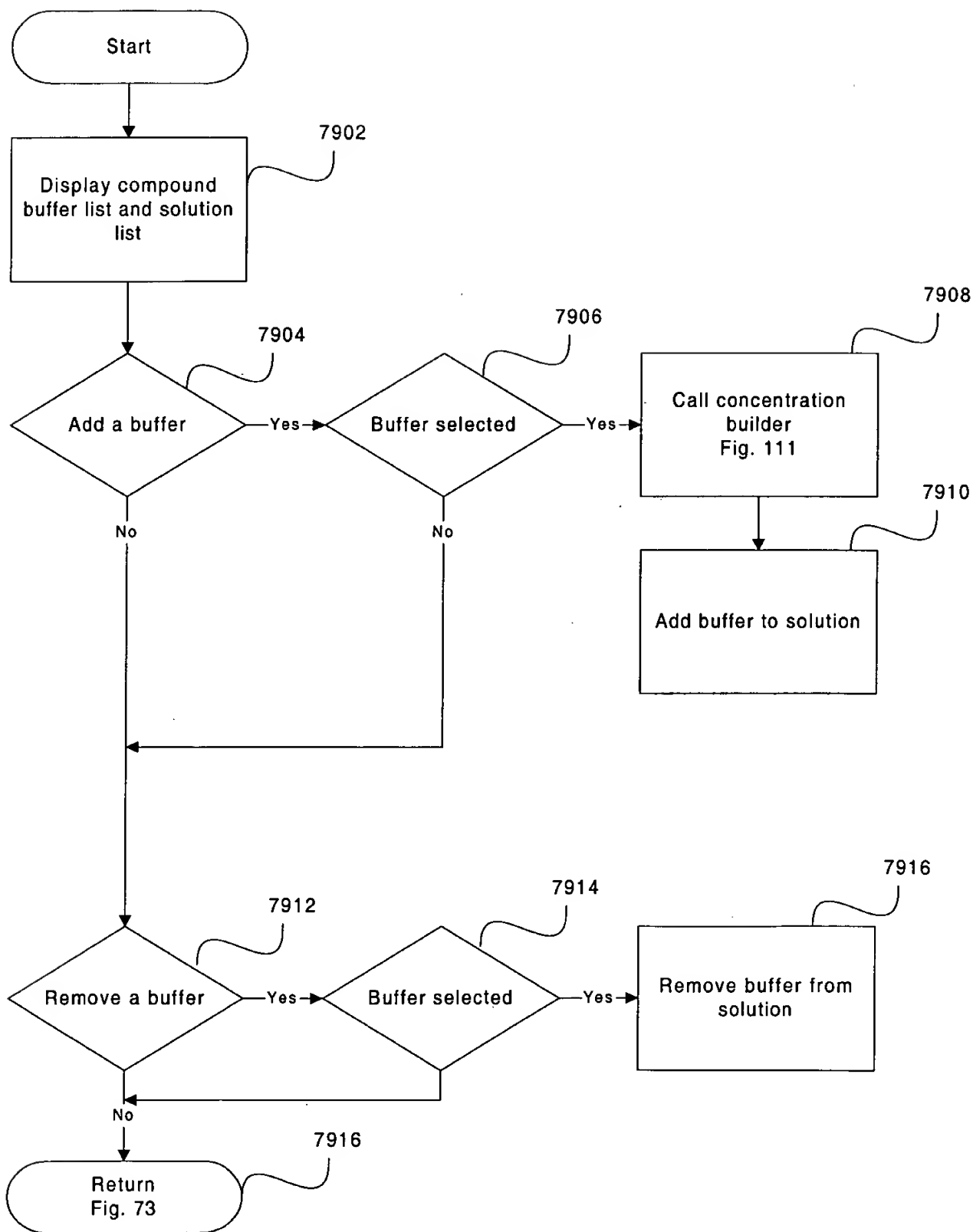


FIGURE 79

Formulation: ammsulf040400

Category: **Salt**

New Chemical...

Chemical Name	Formul
ammonium chloride (NH4 chloride)	NH4Cl
ammonium dihydrogen phosphate (NH4 H2 phosp...	NH4H2
ammonium formate (NH3 formate)	CH2O2
ammonium nitrate (NH4 nitrate)	NH4NO3
ammonium phosphate dibasic ((NH4)2 H phosph...	(NH4)2
ammonium sulfate ((NH4)2 sulfate)	(NH4)2
ammonium sulfate ((NH4)2 sulfate)	(NH4)2
ammonium sulfate ((NH4)2 sulfate)	(NH4)2
ammonium sulfate ((NH4)2 sulfate)	(NH4)2

Solution Composition List:

Concentration	Chemical Name
200.000 mM	ammonium sulfate ((NH4)2 sulfate)

Delete Component...

< Back Finish Cancel Help

8000 8004 8002 8006 8003 8001 8008 8010 8012 8014

Fig. 80

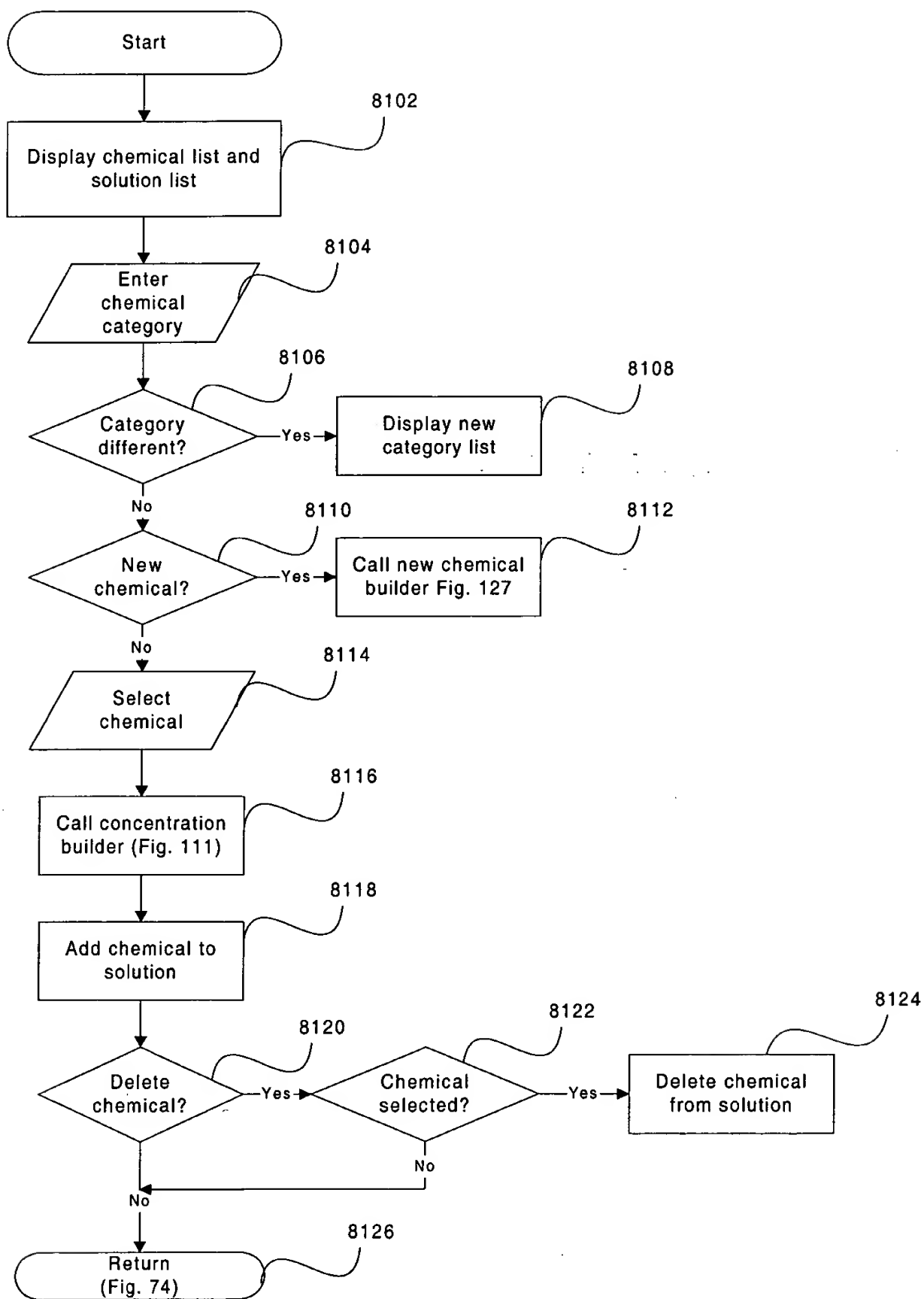


FIGURE 81

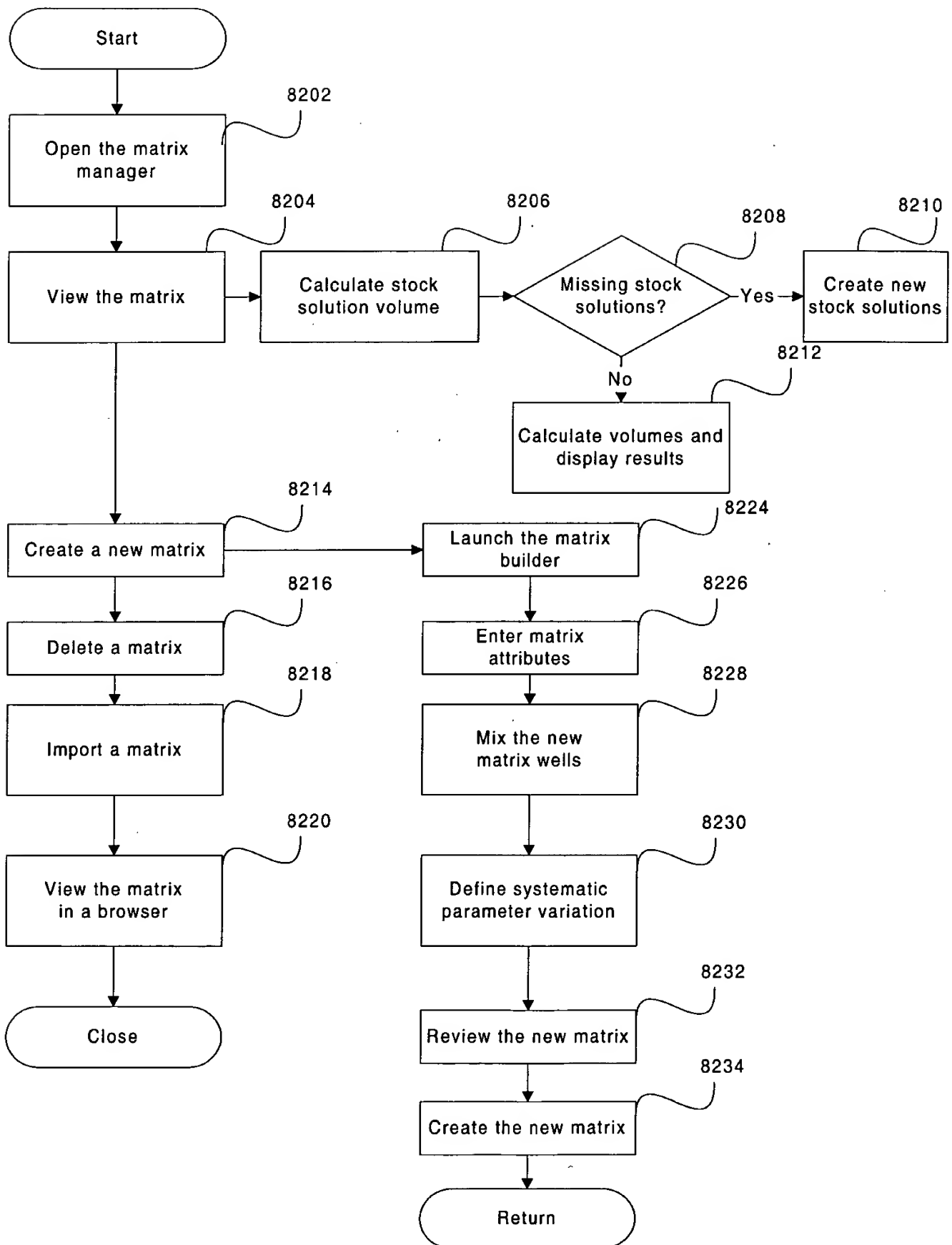


FIGURE 82

09631 85.060200

8301

8310

8308

8314

8300

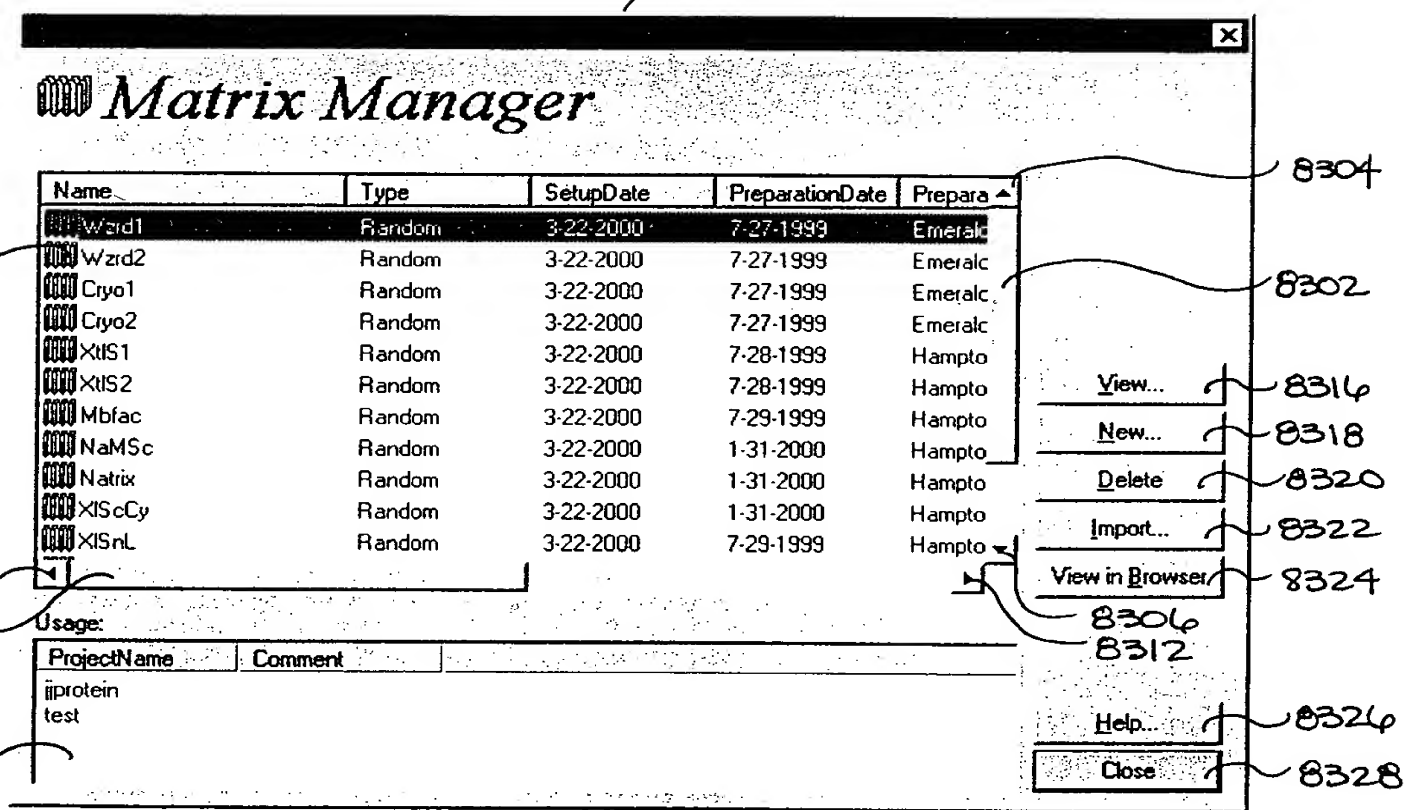


Fig. 83

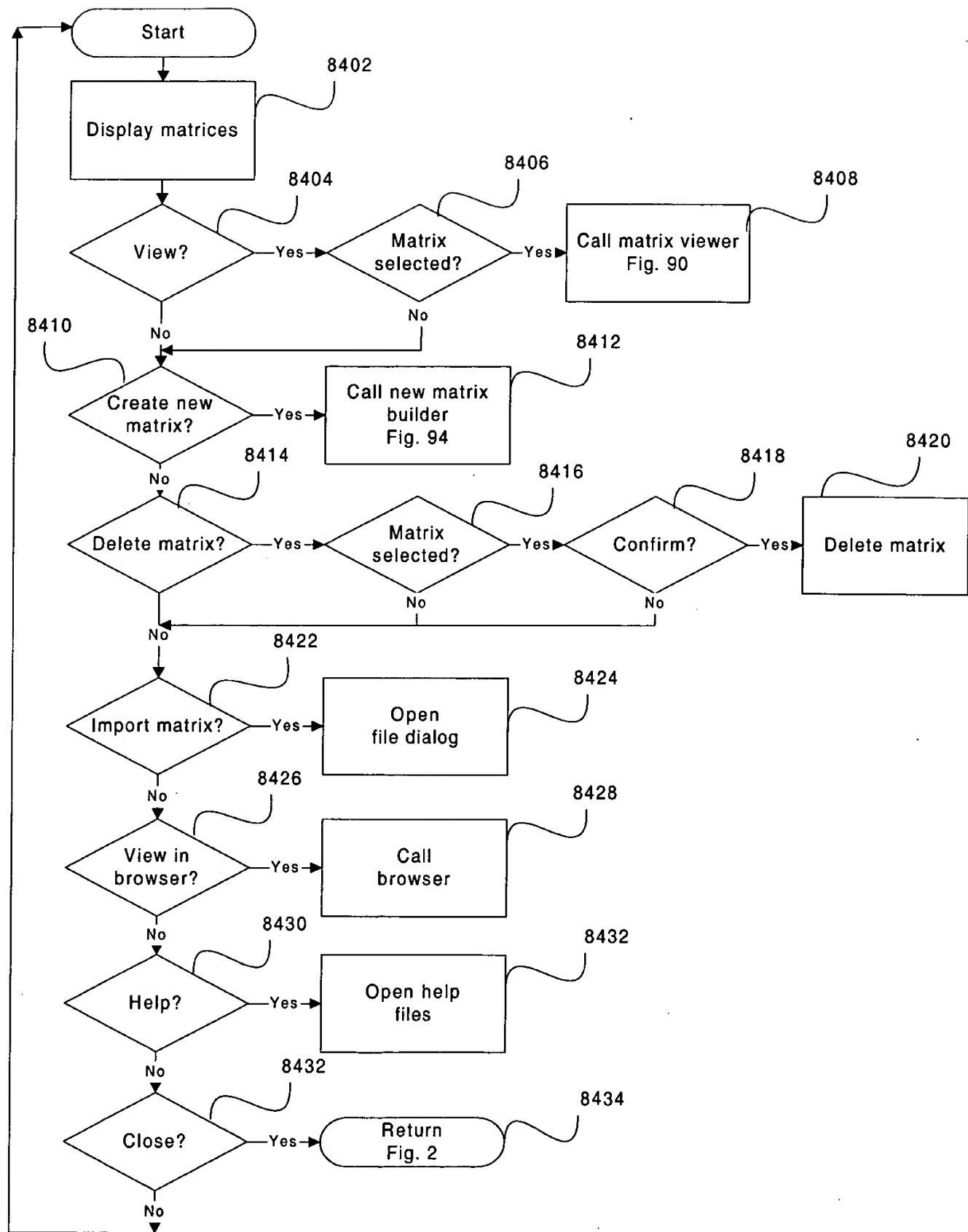


FIGURE 84



002080" 58TE960

8500

## Matrix Viewer

8501

(2)	(2)	(2)	(2)	(2)	(2)
(2)	(2)	(2)	(2)	(2)	(2)
(2)	(2)	(2)	(2)	(2)	(2)
(2)	(2)	(2)	(2)	(2)	(2)

Matrix Name:  
newsys061599

Matrix Type:  
Systematic

Commercial:  
No

Preparator:  
Admin

X-Axis (systematically varied):  
polyethylene glycol 200

Y-Axis (systematically varied):  
sodium chloride

Comment:

8502

Calc. Stock Sol. Vol. needed

8504

OK

Cancel

8506

Fig. 85

09631185-080200

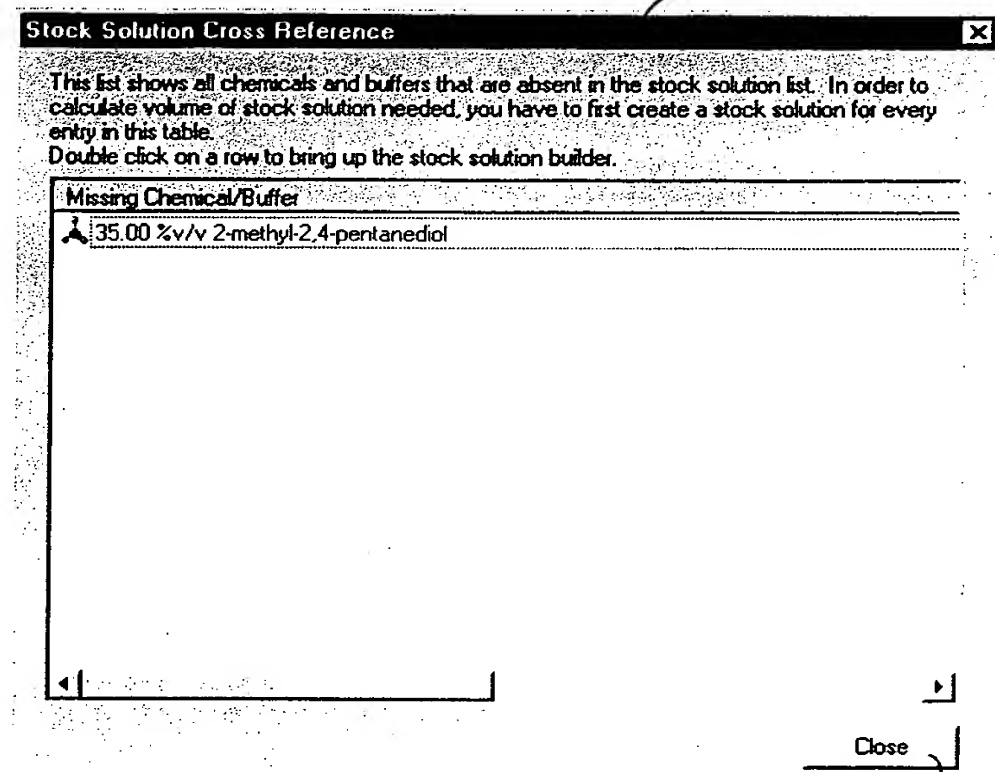


FIG. 86

8700

New Stock Solution (2-methyl-2,4-pentanediol)

Solution Attributes

pH of Solution: 8701

Vapor Pressure Demolality: 8704 mmole/kg 8706

Conductivity: 8710  $\mu\text{S}/\text{cm}$

Solvent: 8712 H<sub>2</sub>O (Mothé)

Solution Name: 8714 MPD 100% (v/v) stock

Concentration: 8718 100 %v/v

pH of Solution

☐ Estimated

☐ Measured

Viscosity

☒ Low

☐ High

Comment: 8720

100% (v/v) MPD stock 8722

Commit Cancel 8728

8732

8734

Fig. 87

Stock solution volumes to build matrix newsys061599

What is the final desired Crystallant volume?  ml

WellID	Volume	Stock Name	Stock Conc.	Chemical Name
1	1.000 ml	PEG-200 stock	100.000 %v/v	PEG-200 (Sigma Chemical ...)
1	0.200 ml	sodium chloride 5 M stock	5000.000 mM	sodium chloride (Sigma Ch...)
1	8.800 ml		n/a	H2O
2	1.500 ml	PEG-200 stock	100.000 %v/v	PEG-200 (Sigma Chemical ...)
2	0.200 ml	sodium chloride 5 M stock	5000.000 mM	sodium chloride (Sigma Ch...)
2	8.300 ml		n/a	H2O
3	2.000 ml	PEG-200 stock	100.000 %v/v	PEG-200 (Sigma Chemical ...)
3	0.200 ml	sodium chloride 5 M stock	5000.000 mM	sodium chloride (Sigma Ch...)
3	7.800 ml		n/a	H2O
4	2.500 ml	PEG-200 stock	100.000 %v/v	PEG-200 (Sigma Chemical ...)
4	0.200 ml	sodium chloride 5 M stock	5000.000 mM	sodium chloride (Sigma Ch...)
4	7.300 ml		n/a	H2O
5	3.000 ml	PEG-200 stock	100.000 %v/v	PEG-200 (Sigma Chemical ...)
5	0.200 ml	sodium chloride 5 M stock	5000.000 mM	sodium chloride (Sigma Ch...)

Close Help... View in Browser... Save to HTML...

Fig. 88

WellID	Volume	Stock Name	Stock Conc.	Chemical Name	Chemical Type	Final Conc.
1	1.000 ml	PEG-200 stock	100.000 %v/v	PEG-200 (Sigma Chemical Co.)	Precipitant	10.000 %v/v
1	0.200 ml	sodium chloride 5 M stock	5000.000 mM	sodium chloride (Sigma Chemical Co.)	Precipitant	100.000 mM

Fig. 89A

1	8.800 ml		n/a	H2O	Solvent	n/a
2	1.500 ml	PEG-200 stock	100.000 %v/v	PEG-200 (Sigma Chemical Co.)	Precipitant	15.000 %v/v
2	0.200 ml	sodium chloride 5 M stock	5000.000 mM	sodium chloride (Sigma Chemical Co.)	Precipitant	100.000 mM
2	8.300 ml		n/a	H2O	Solvent	n/a
3	2.000 ml	PEG-200 stock	100.000 %v/v	PEG-200 (Sigma Chemical Co.)	Precipitant	20.000 %v/v
3	0.200 ml	sodium chloride 5 M stock	5000.000 mM	sodium chloride (Sigma Chemical Co.)	Precipitant	100.000 mM
3	7.800 ml		n/a	H2O	Solvent	n/a
4	2.500 ml	PEG-200 stock	100.000 %v/v	PEG-200 (Sigma Chemical Co.)	Precipitant	25.000 %v/v
4	0.200 ml	sodium chloride 5 M stock	5000.000 mM	sodium chloride (Sigma Chemical Co.)	Precipitant	100.000 mM
4	7.300 ml		n/a	H2O	Solvent	n/a
5	3.000 ml	PEG-200 stock	100.000 %v/v	PEG-200 (Sigma Chemical Co.)	Precipitant	30.000 %v/v
5	0.200 ml	sodium chloride 5 M stock	5000.000 mM	sodium chloride (Sigma Chemical Co.)	Precipitant	100.000 mM
5	6.800 ml		n/a	H2O	Solvent	n/a
6	3.500 ml	PEG-200	100.000	PEG-200	Precipitant	35.000

Fig. 89B

		stock	%v/v	(Sigma Chemical Co.)	t	%v/v
6	0.200 ml	sodium chloride 5 M stock	5000.000 mM	sodium chloride (Sigma Chemical Co.)	Precipitant	100.000 mM
6	6.300 ml		n/a	H <sub>2</sub> O	Solvent	n/a
7	1.000 ml	PEG-200 stock	100.000 %v/v	PEG-200 (Sigma Chemical Co.)	Precipitant	10.000 %v/v
7	0.400 ml	sodium chloride 5 M stock	5000.000 mM	sodium chloride (Sigma Chemical Co.)	Precipitant	200.000 mM
7	8.600 ml		n/a	H <sub>2</sub> O	Solvent	n/a
8	1.500 ml	PEG-200 stock	100.000 %v/v	PEG-200 (Sigma Chemical Co.)	Precipitant	15.000 %v/v
8	0.400 ml	sodium chloride 5 M stock	5000.000 mM	sodium chloride (Sigma Chemical Co.)	Precipitant	200.000 mM
8	8.100 ml		n/a	H <sub>2</sub> O	Solvent	n/a
9	2.000 ml	PEG-200 stock	100.000 %v/v	PEG-200 (Sigma Chemical Co.)	Precipitant	20.000 %v/v
9	0.400 ml	sodium chloride 5 M stock	5000.000 mM	sodium chloride (Sigma Chemical Co.)	Precipitant	200.000 mM
9	7.600 ml		n/a	H <sub>2</sub> O	Solvent	n/a
10	2.500 ml	PEG-200 stock	100.000 %v/v	PEG-200 (Sigma Chemical Co.)	Precipitant	25.000 %v/v

Fig. 89C

				Co.)		
10	0.400 ml	sodium chloride 5 M stock	5000.000 mM	sodium chloride (Sigma Chemical Co.)	Precipitant	200.000 mM
10	7.100 ml		n/a	H <sub>2</sub> O	Solvent	n/a
11	3.000 ml	PEG-200 stock	100.000 %v/v	PEG-200 (Sigma Chemical Co.)	Precipitant	30.000 %v/v
11	0.400 ml	sodium chloride 5 M stock	5000.000 mM	sodium chloride (Sigma Chemical Co.)	Precipitant	200.000 mM
11	6.600 ml		n/a	H <sub>2</sub> O	Solvent	n/a
12	3.500 ml	PEG-200 stock	100.000 %v/v	PEG-200 (Sigma Chemical Co.)	Precipitant	35.000 %v/v
12	0.400 ml	sodium chloride 5 M stock	5000.000 mM	sodium chloride (Sigma Chemical Co.)	Precipitant	200.000 mM
12	6.100 ml		n/a	H <sub>2</sub> O	Solvent	n/a
13	1.000 ml	PEG-200 stock	100.000 %v/v	PEG-200 (Sigma Chemical Co.)	Precipitant	10.000 %v/v
13	0.600 ml	sodium chloride 5 M stock	5000.000 mM	sodium chloride (Sigma Chemical Co.)	Precipitant	300.000 mM
13	8.400 ml		n/a	H <sub>2</sub> O	Solvent	n/a
14	1.500 ml	PEG-200 stock	100.000 %v/v	PEG-200 (Sigma Chemical Co.)	Precipitant	15.000 %v/v
14	0.600 ml	sodium	5000.000	sodium	Precipitant	300.000

Fig. 89D

		chloride 5 M stock	mM	chloride (Sigma Chemical Co.)	t	mM
14	7.900 ml		n/a	H <sub>2</sub> O	Solvent	n/a
15	2.000 ml	PEG-200 stock	100.000 %v/v	PEG-200 (Sigma Chemical Co.)	Precipitan t	20.000 %v/v
15	0.600 ml	sodium chloride 5 M stock	5000.000 mM	sodium chloride (Sigma Chemical Co.)	Precipitan t	300.000 mM
15	7.400 ml		n/a	H <sub>2</sub> O	Solvent	n/a
16	2.500 ml	PEG-200 stock	100.000 %v/v	PEG-200 (Sigma Chemical Co.)	Precipitan t	25.000 %v/v
16	0.600 ml	sodium chloride 5 M stock	5000.000 mM	sodium chloride (Sigma Chemical Co.)	Precipitan t	300.000 mM
16	6.900 ml		n/a	H <sub>2</sub> O	Solvent	n/a
17	3.000 ml	PEG-200 stock	100.000 %v/v	PEG-200 (Sigma Chemical Co.)	Precipitan t	30.000 %v/v
17	0.600 ml	sodium chloride 5 M stock	5000.000 mM	sodium chloride (Sigma Chemical Co.)	Precipitan t	300.000 mM
17	6.400 ml		n/a	H <sub>2</sub> O	Solvent	n/a
18	3.500 ml	PEG-200 stock	100.000 %v/v	PEG-200 (Sigma Chemical Co.)	Precipitan t	35.000 %v/v
18	0.600 ml	sodium chloride 5 M stock	5000.000 mM	sodium chloride (Sigma	Precipitan t	300.000 mM

Fig. 80E



				Chemical Co.)		
18	5.900 ml		n/a	H2O	Solvent	n/a
19	1.000 ml	PEG-200 stock	100.000 %v/v	PEG-200 (Sigma Chemical Co.)	Precipitant	10.000 %v/v
19	0.800 ml	sodium chloride 5 M stock	5000.000 mM	sodium chloride (Sigma Chemical Co.)	Precipitant	400.000 mM
19	8.200 ml		n/a	H2O	Solvent	n/a
20	1.500 ml	PEG-200 stock	100.000 %v/v	PEG-200 (Sigma Chemical Co.)	Precipitant	15.000 %v/v
20	0.800 ml	sodium chloride 5 M stock	5000.000 mM	sodium chloride (Sigma Chemical Co.)	Precipitant	400.000 mM
20	7.700 ml		n/a	H2O	Solvent	n/a
21	2.000 ml	PEG-200 stock	100.000 %v/v	PEG-200 (Sigma Chemical Co.)	Precipitant	20.000 %v/v
21	0.800 ml	sodium chloride 5 M stock	5000.000 mM	sodium chloride (Sigma Chemical Co.)	Precipitant	400.000 mM
21	7.200 ml		n/a	H2O	Solvent	n/a
22	2.500 ml	PEG-200 stock	100.000 %v/v	PEG-200 (Sigma Chemical Co.)	Precipitant	25.000 %v/v
22	0.800 ml	sodium chloride 5 M stock	5000.000 mM	sodium chloride (Sigma Chemical Co.)	Precipitant	400.000 mM

Fig. 89F

22	6.700 ml		n/a	H2O	Solvent	n/a
23	3.000 ml	PEG-200 stock	100.000 %v/v	PEG-200 (Sigma Chemical Co.)	Precipitant	30.000 %v/v
23	0.800 ml	sodium chloride 5 M stock	5000.000 mM	sodium chloride (Sigma Chemical Co.)	Precipitant	400.000 mM
23	6.200 ml		n/a	H2O	Solvent	n/a
24	3.500 ml	PEG-200 stock	100.000 %v/v	PEG-200 (Sigma Chemical Co.)	Precipitant	35.000 %v/v
24	0.800 ml	sodium chloride 5 M stock	5000.000 mM	sodium chloride (Sigma Chemical Co.)	Precipitant	400.000 mM
24	5.700 ml		n/a	H2O	Solvent	n/a

Fig. 89G

09631185-080200

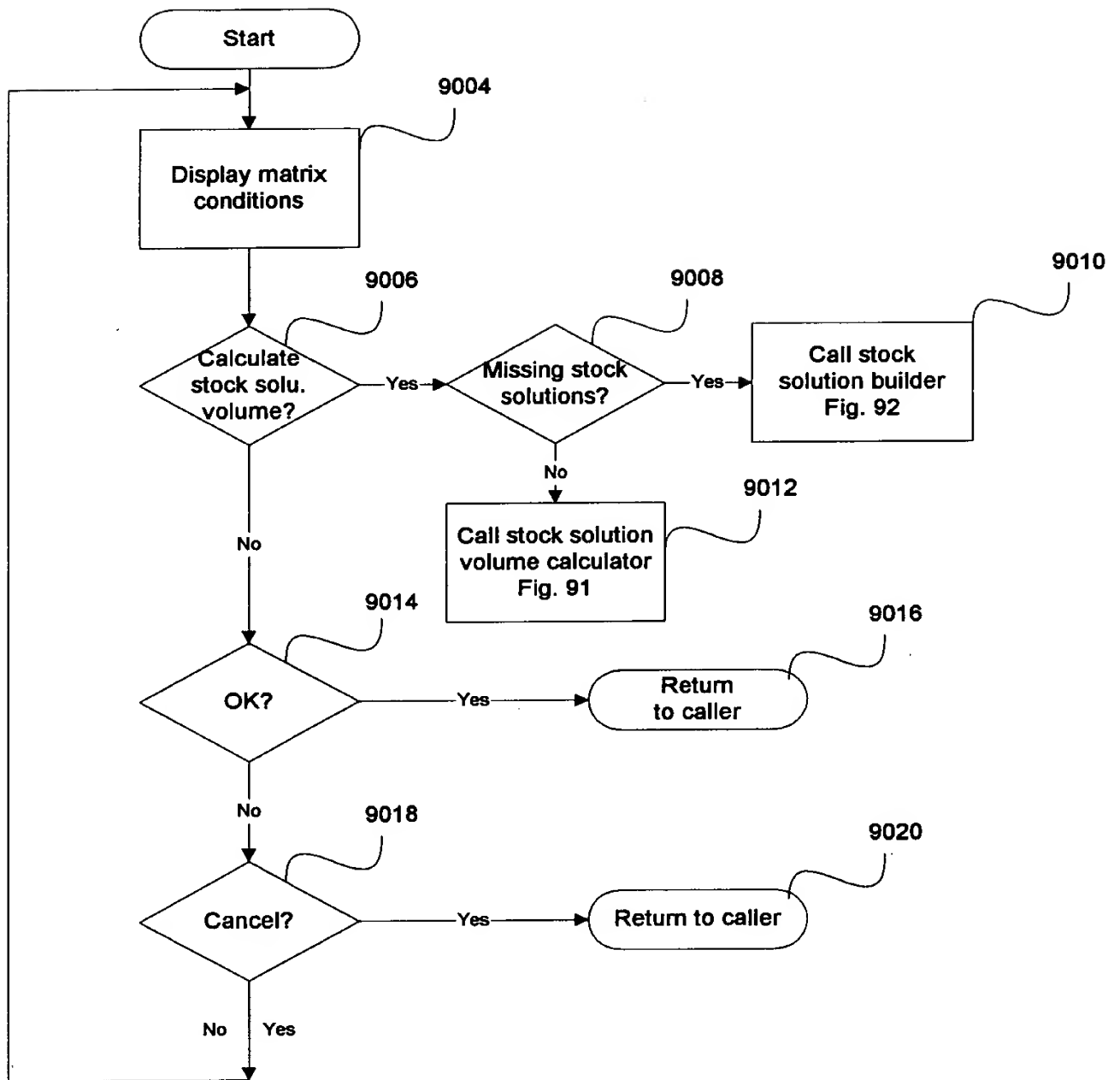


FIGURE 90

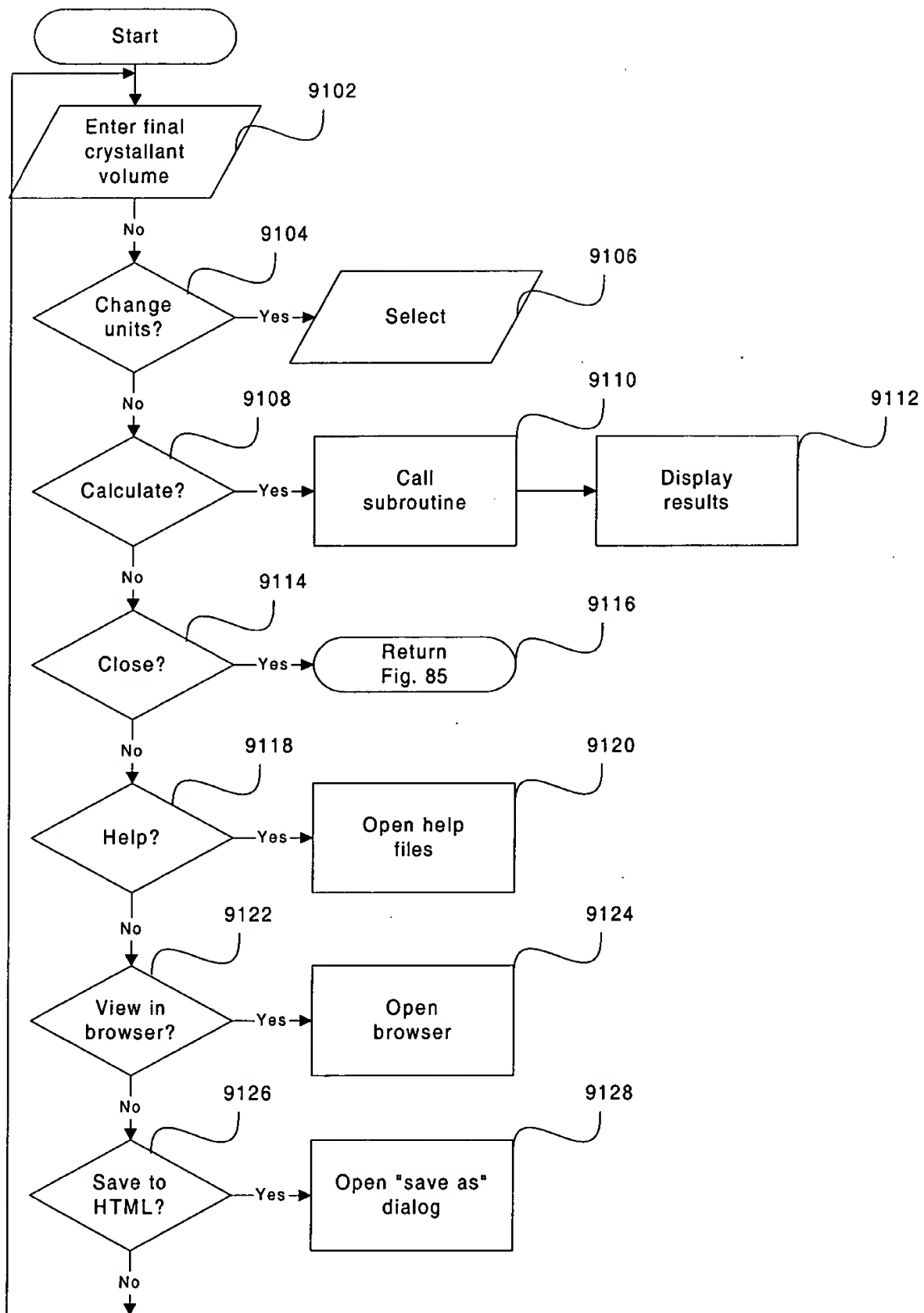


FIGURE 91

09631185.080200

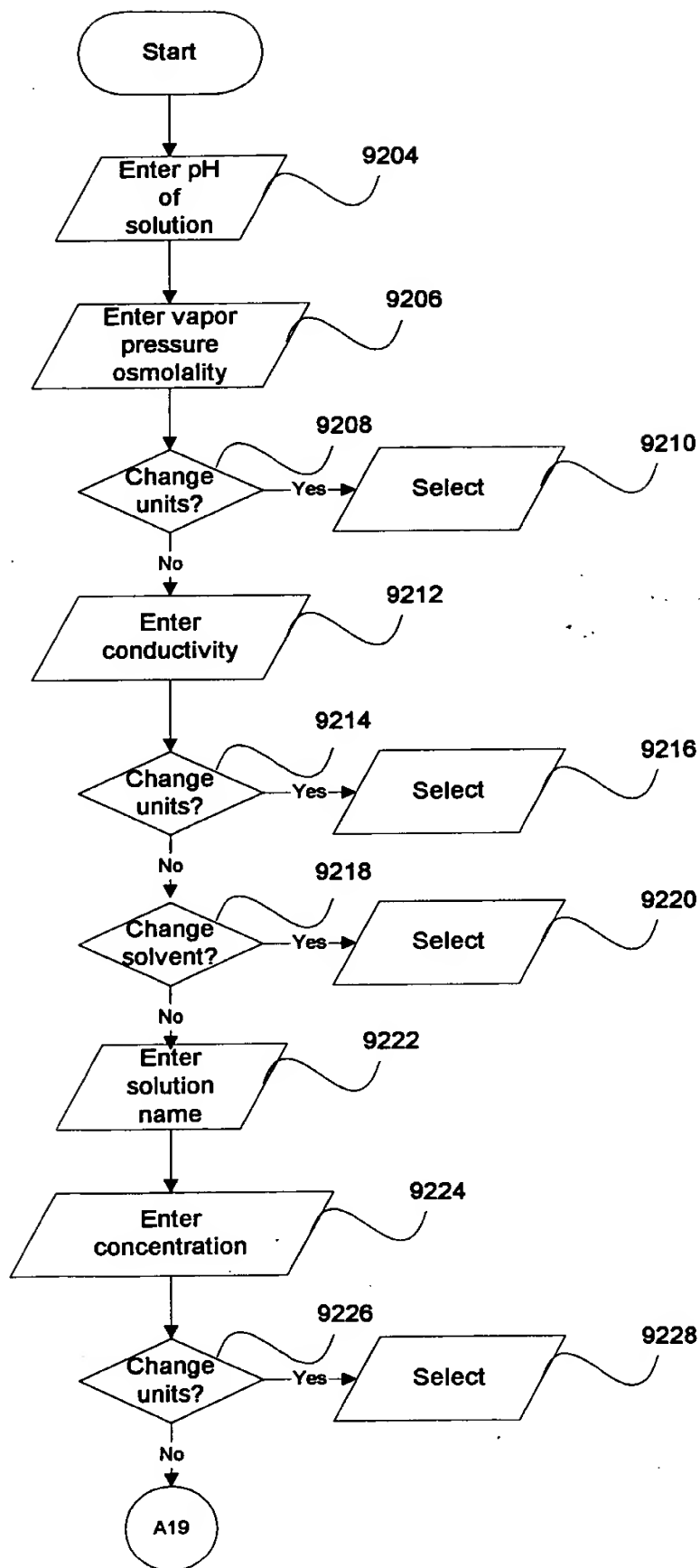


FIGURE 92

002030" 58TTE960

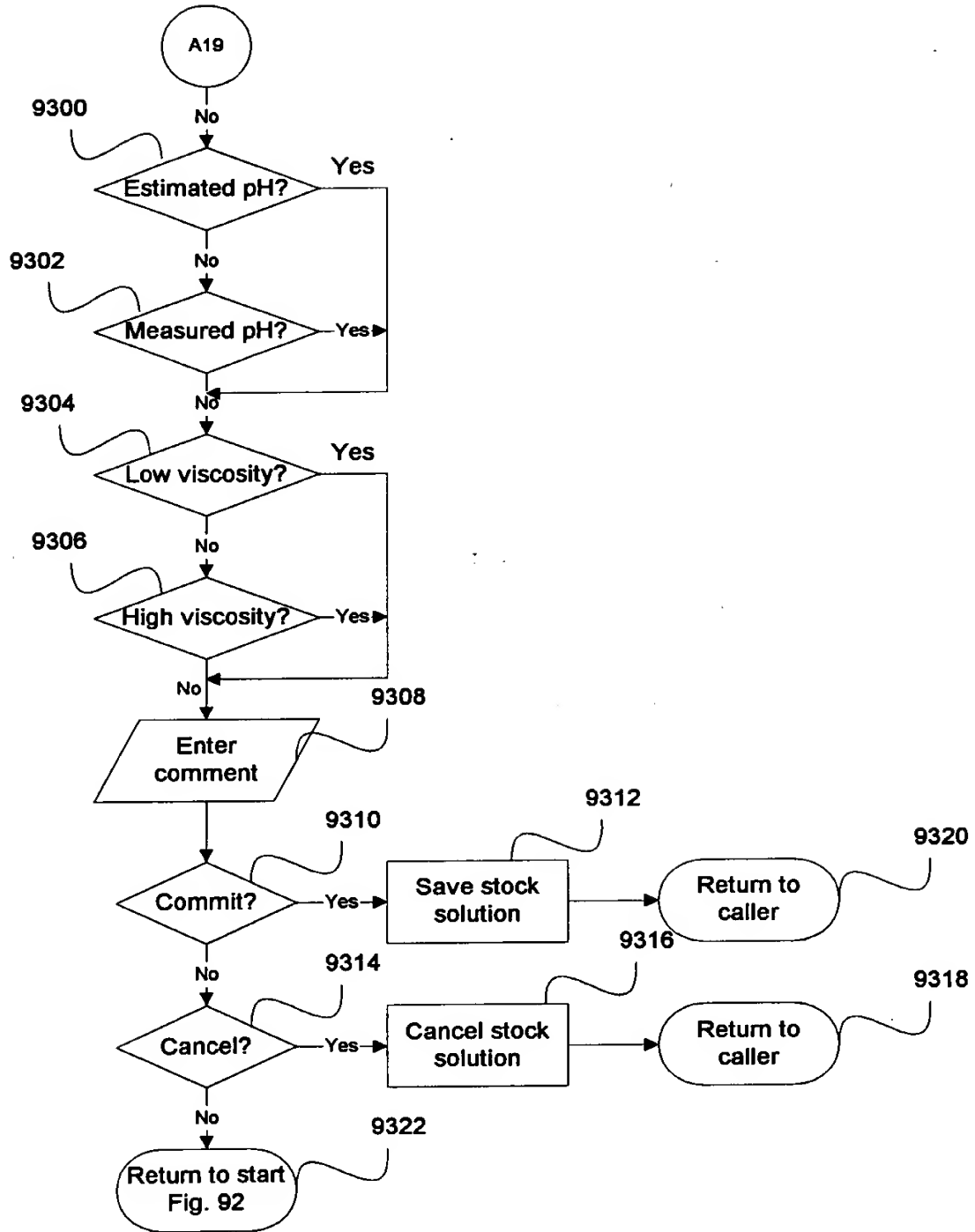


FIGURE 93

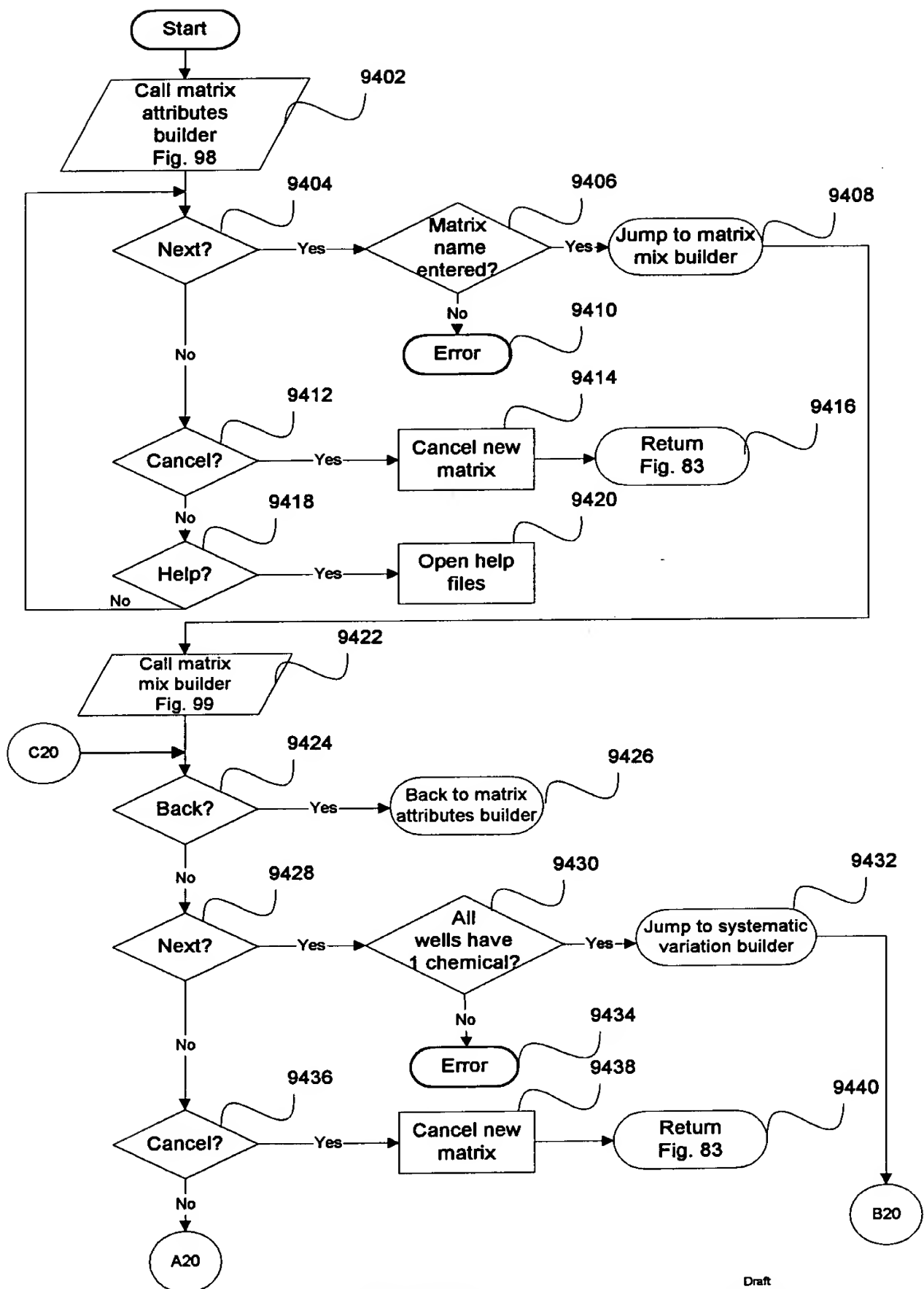


FIGURE 94

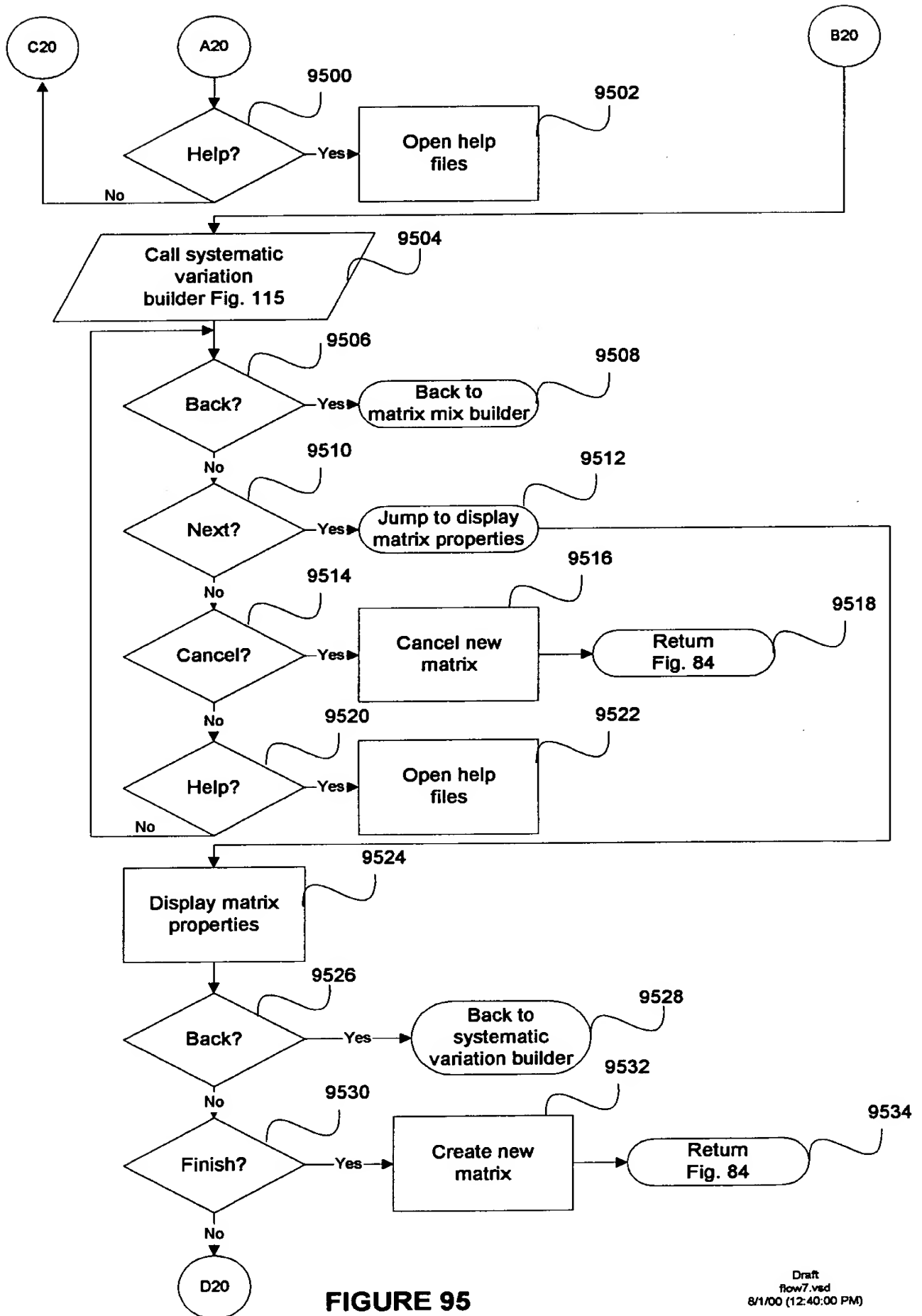


FIGURE 95



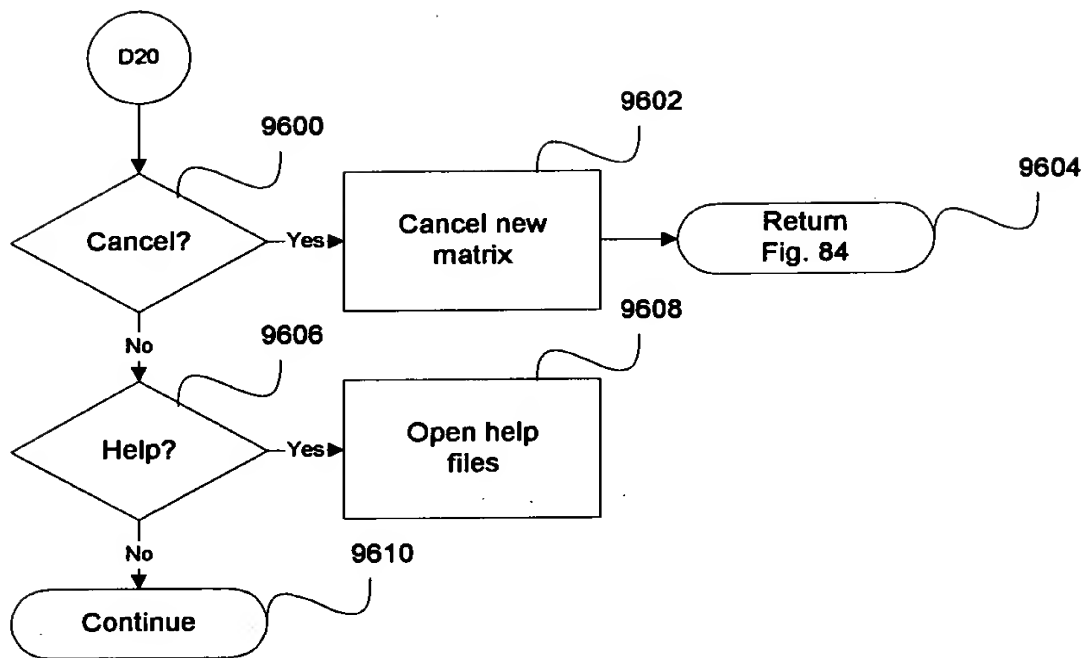


FIGURE 96

The screenshot shows a 'Matrix Wizard' dialog box. On the left is a grayscale image of a matrix. On the right are input fields for 'Matrix Name' (new48040400), 'Well Count' (48), and 'Column Count' (6). Below these is a 'Creator' section with a checked 'Commercial' option and a 'Preparator' dropdown set to 'Admin'. At the bottom are buttons for '< Back', 'Next >', 'Cancel', and 'Help'. Handwritten annotations include: 9700 for the title bar, 9704, 9706 for the Matrix Name field, 9701 for the Well Count field, 9702 for the Column Count field, 9708 for the Creator section, 9710, 9712 for the Commercial checkbox, 9714 for the Preparator dropdown, 9718 for the 'Next >' button, and 9716 for the 'Cancel' button. A bracket labeled 9720 spans the bottom buttons, with 9722, 9724, and 9726 marking specific points on the button area.

Matrix Wizard

Matrix Name: new48040400

Well Count: 48

Column Count: 6

Creator

☒ Commercial (Matrix is available from a commercial source)

Preparator: Admin

< Back Next > Cancel Help

Fig. 97

0963115.030200

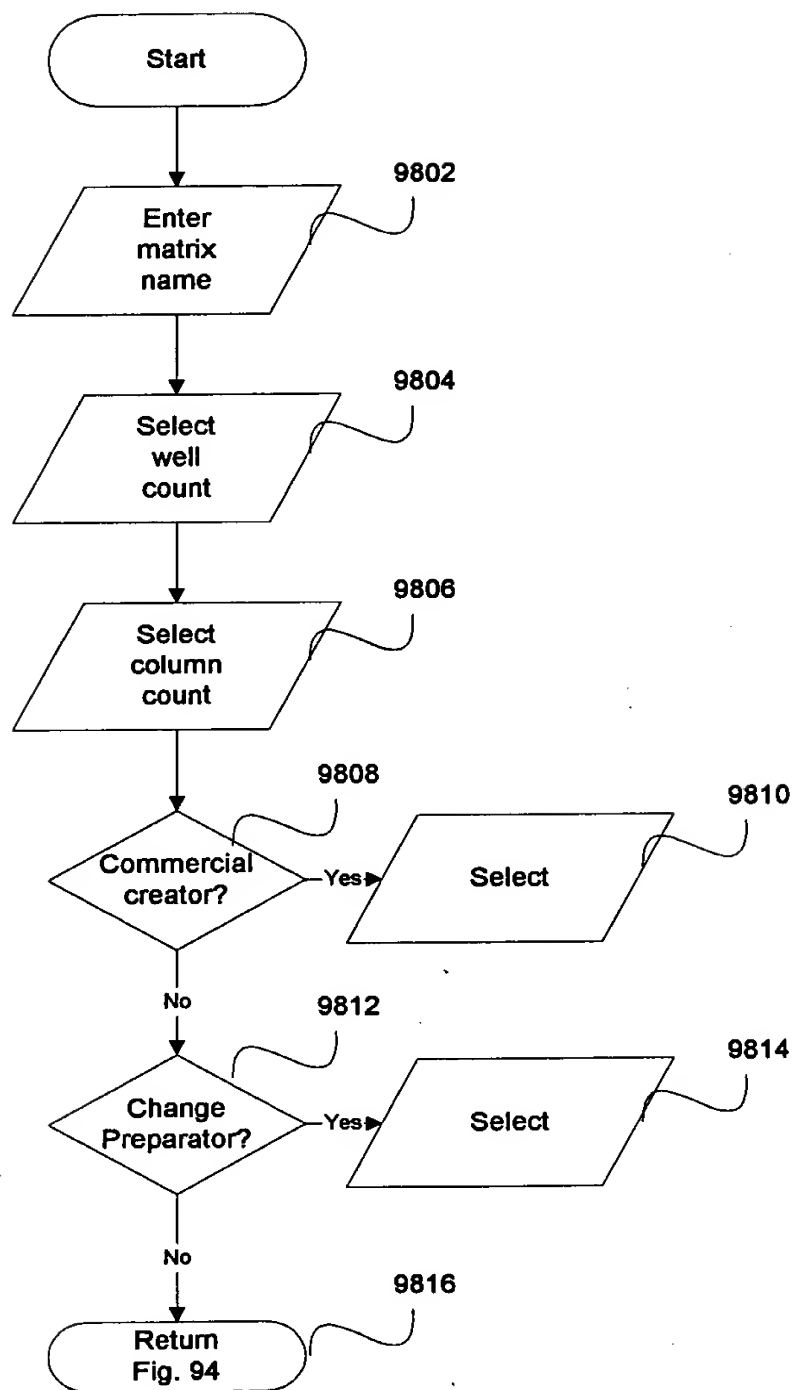


FIGURE 98

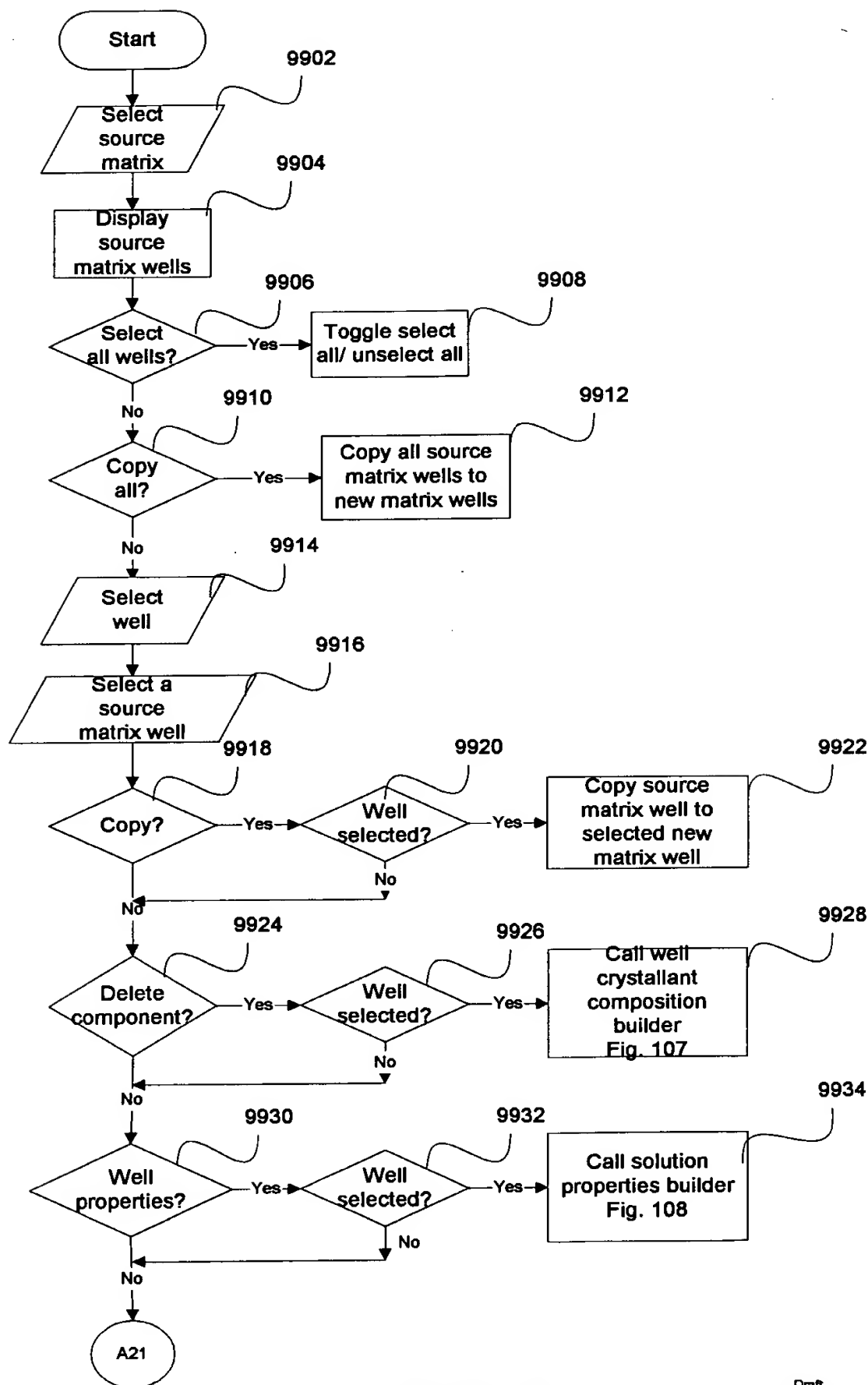


FIGURE 99

002030"SBTFE960

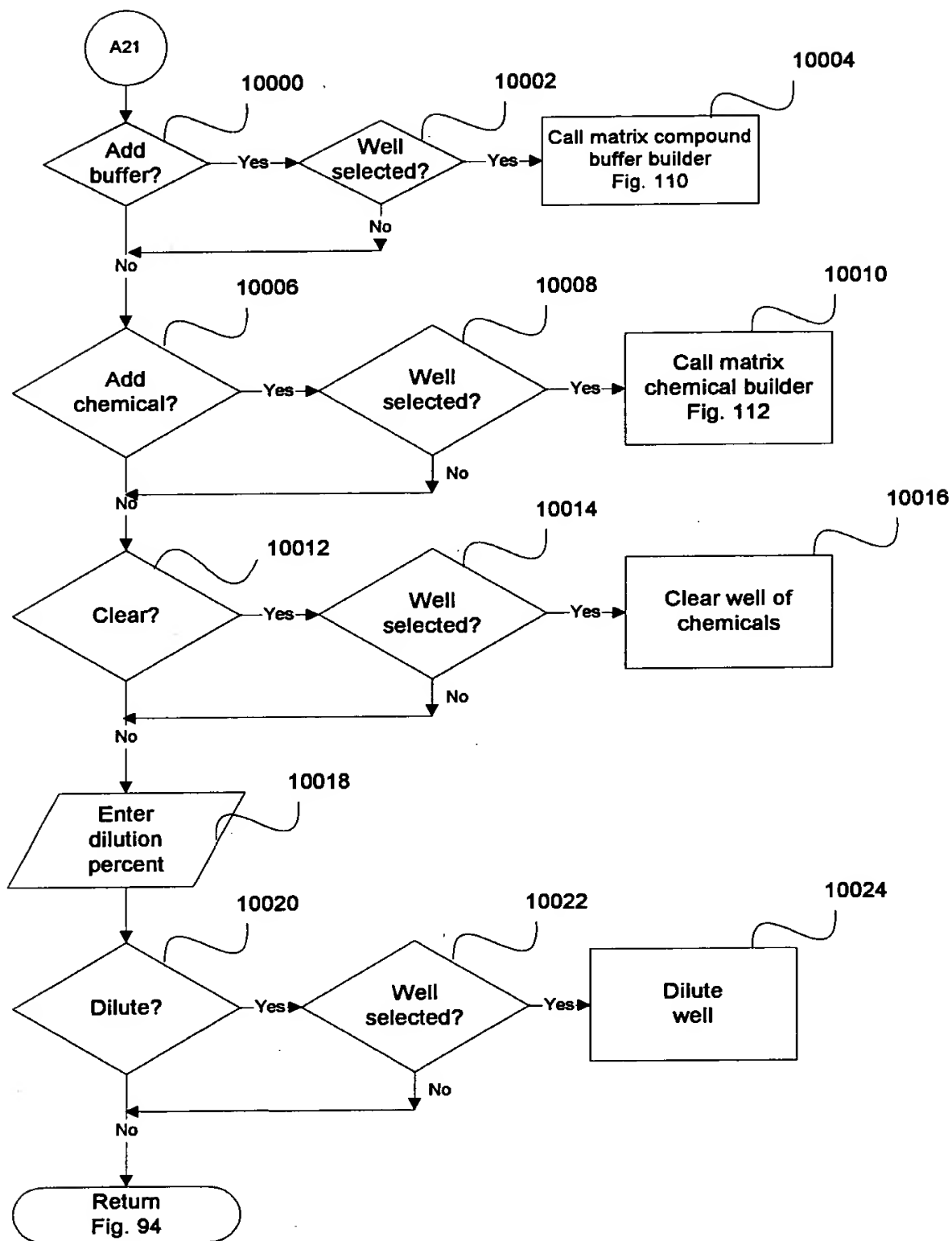


FIGURE 100

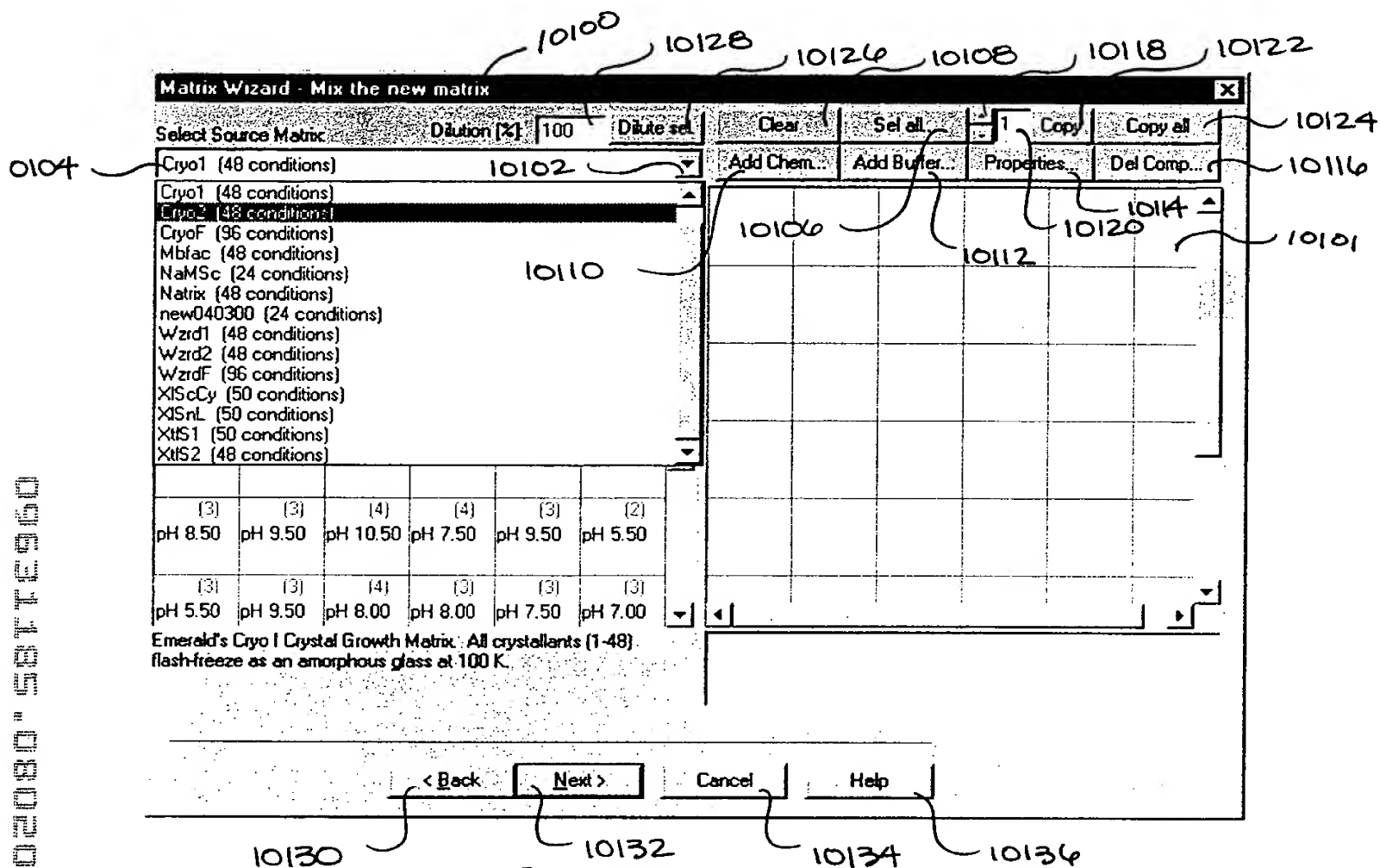


Fig. 101

09631185-080200

Matrix Wizard - Mix the new matrix

Select Source Matrix: **Dilution [%]:** 50 **Dilute sel** **Clear** **Set all** **1** **Copy** **Copy all**

**Cryo1 (48 conditions)** **Add Chem...** **Add Buffer...** **Properties...** **Del Comp...**

(2) pH 4.20	(2) pH 4.50	(2) pH 5.50	(3) pH 7.50	(3) pH 5.50	(3) pH 6.50	(2) pH 4.20	(2) pH 4.20	(2) pH 4.20	(2) pH 4.20
(3) pH 8.50	(2) pH 6.50	(2) pH 4.20	(2) pH 8.00	(3) pH 8.50	(3) pH 4.50	<p>Well 1 -</p> <p>Compound Buffers: 50.000 mM (Na2 H phosphate, citric acid) pH 4.20</p> <p>Chemicals: 20.000 %v/v MPD, Precipitant (Fluka Chemical Corp. 68340)</p> <p>Solution Properties: Final pH: 4.20 est. Conductivity: n/a Vapor Pressure Osmolality: n/a Viscosity: Low Solvent: H2O</p>			
(3) pH 6.00	(4) pH 4.20	(3) pH 9.50	(4) pH 6.00	(2) pH 7.50	(3) pH 8.00				
(2) pH 8.50	(3) pH 5.50	(3) pH 4.50	(2) pH 6.20	(3) pH 7.00	(3) pH 6.20				
(3) pH 8.50	(3) pH 9.50	(4) pH 10.50	(4) pH 7.50	(3) pH 9.50	(2) pH 5.50				
(3) pH 5.50	(3) pH 9.50	(4) pH 8.00	(3) pH 8.00	(3) pH 7.50	(3) pH 7.00				

Emerald's Cryo I Crystal Growth Matrix. All crystallants (1-48) flash-freeze as an amorphous glass at 100 K.

< Back Next > Cancel Help

Fig. 102

10300

**Crystallant Composition - Removal List** X

Check the box for the Chemicals to remove from selected wells:

Chemical Name	Abbreviation	Formula
<input type="checkbox"/> 2-methyl-2,4-pentanediol	MPD	C <sub>6</sub> H <sub>14</sub> O <sub>2</sub>

◀ | ▶

Check the box for the Compound Buffers to remove from selected wells:

Buffer PH	Buffering Agent	pH Conjugate
<input type="checkbox"/> 4.20	sodium phosphate dibasic (N...	citric acid monohydrate (citric...

◀ | ▶

10301

10302

10308

10306

10304a

10304b

FIG. 103



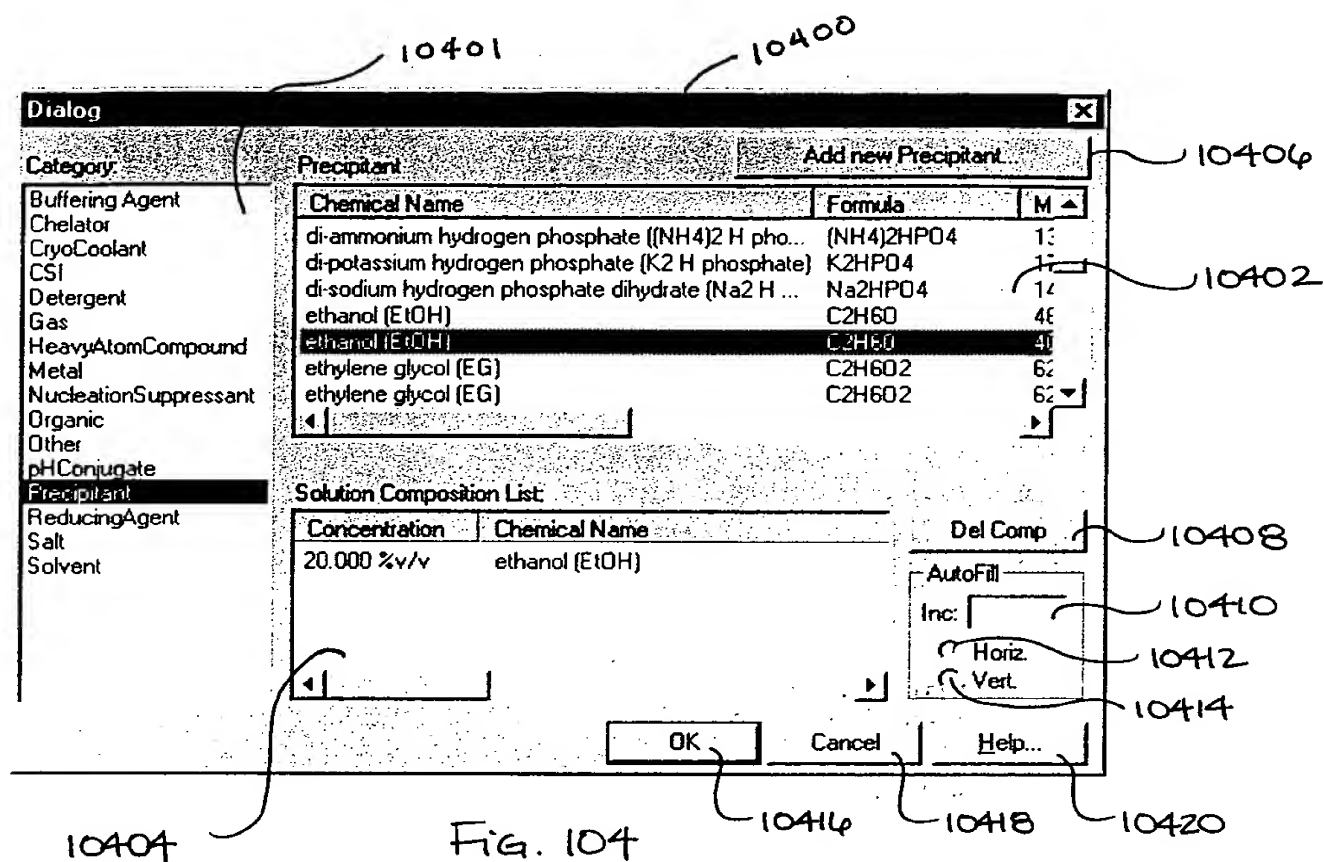


FIG. 104

002080 " 080200

Dialog

Category	Precipitant	Add new Precipitant	
Buffering Agent	Chemical Name	Formula	M
Chelator	polyethylene glycol 12000 (PEG-12000)	H(OCH <sub>2</sub> CH <sub>2</sub> O) <sub>n</sub> H	12
CryoCoolant	polyethylene glycol 1500 (PEG-1500)	H(OCH <sub>2</sub> CH <sub>2</sub> O) <sub>n</sub> H	15
CSI	polyethylene glycol 1500 (PEG-1500)	H(OCH <sub>2</sub> CH <sub>2</sub> O) <sub>n</sub> H	15
Detergent	polyethylene glycol 200 (PEG-200)	H(OCH <sub>2</sub> CH <sub>2</sub> O) <sub>n</sub> H	20
Gas	polyethylene glycol 200 (PEG-200)	H(OCH <sub>2</sub> CH <sub>2</sub> O) <sub>n</sub> H	20
HeavyAtomCompound	polyethylene glycol 200 (PEG-200)	H(OCH <sub>2</sub> CH <sub>2</sub> O) <sub>n</sub> H	20
Metal	polyethylene glycol 200 (PEG-200)	H(OCH <sub>2</sub> CH <sub>2</sub> O) <sub>n</sub> H	20
NucleationSuppressant	polyethylene glycol 2000 dimethyl ether (PEG-200...)	H(OCH <sub>2</sub> CH <sub>2</sub> O) <sub>n</sub> H	20
Organic			
Other			
pHConjugate			
Precipitant			
ReducingAgent			
Salt			
Solvent			

Solution Composition List

Concentration	Chemical Name	Del Comp
10.000 %v/v	polyethylene glycol 200 (PEG-200)	

AutoFill

Inc: 5

☒ Horiz

☐ Vert

OK Cancel Help...

10500

10502

Fig. 105

09631185, 080200

10600

Matrix Wizard - Mix the new matrix

Select Source Matrix:  Dilute sel

(1)	(1)	(1)	(1)	(1)	(1)
(1)	(1)	(1)	(1)	(1)	(1)
(1)	(1)	(1)	(1)	(1)	(1)
(1)	(1)	(1)	(1)	(1)	(1)

< Back   Next >   Cancel   Help

Fig. 106

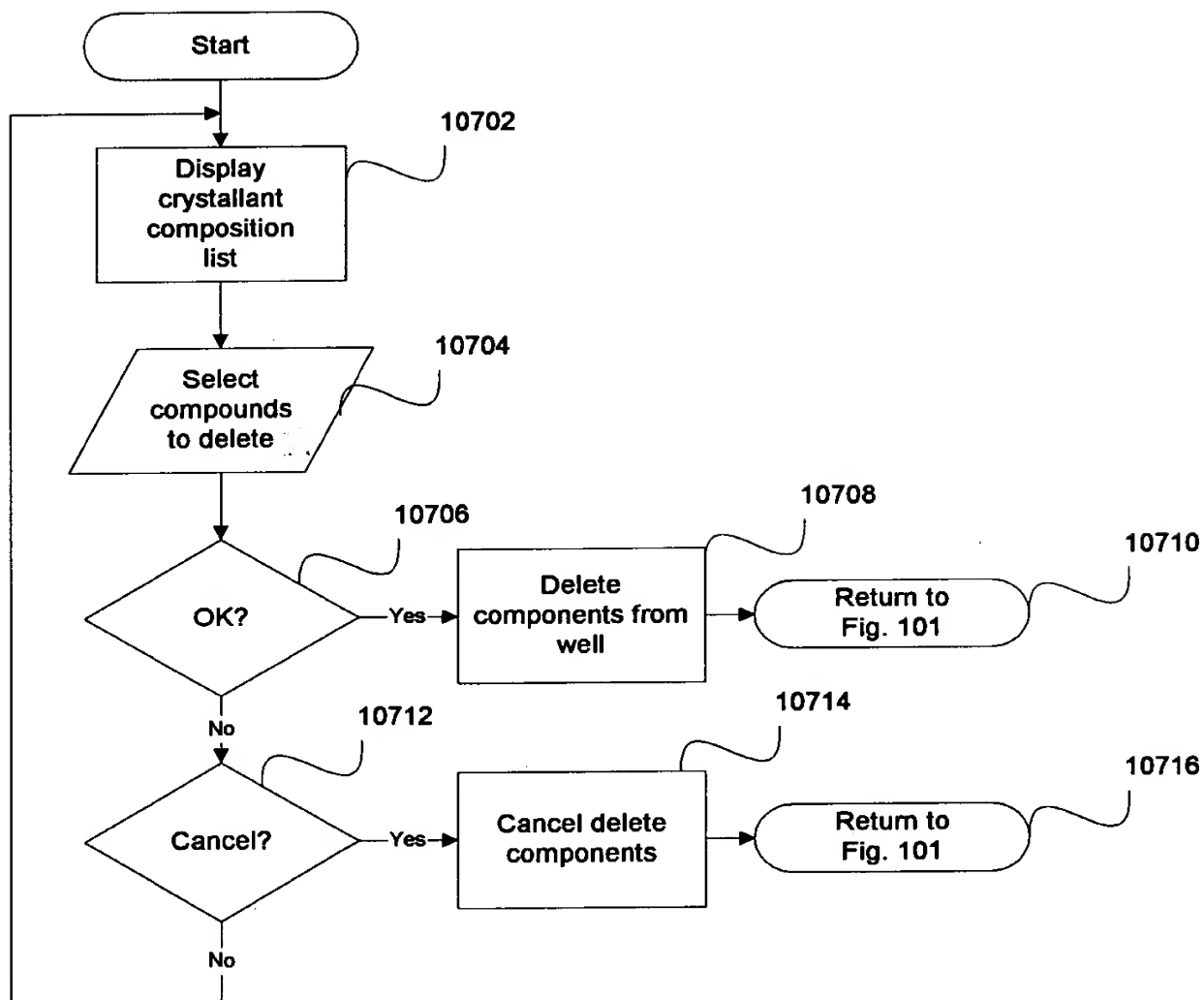


FIGURE 107

002030" 5811E 950

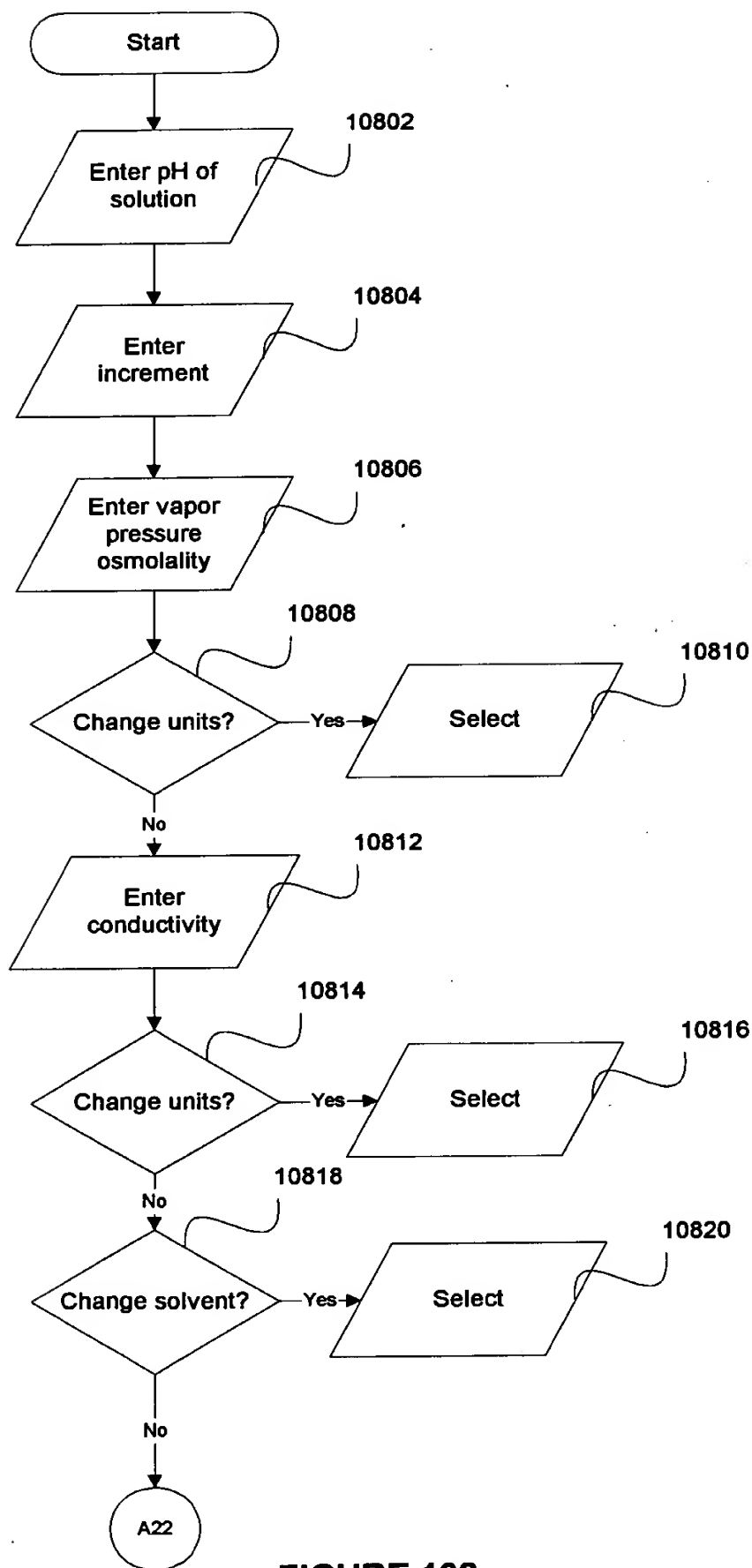
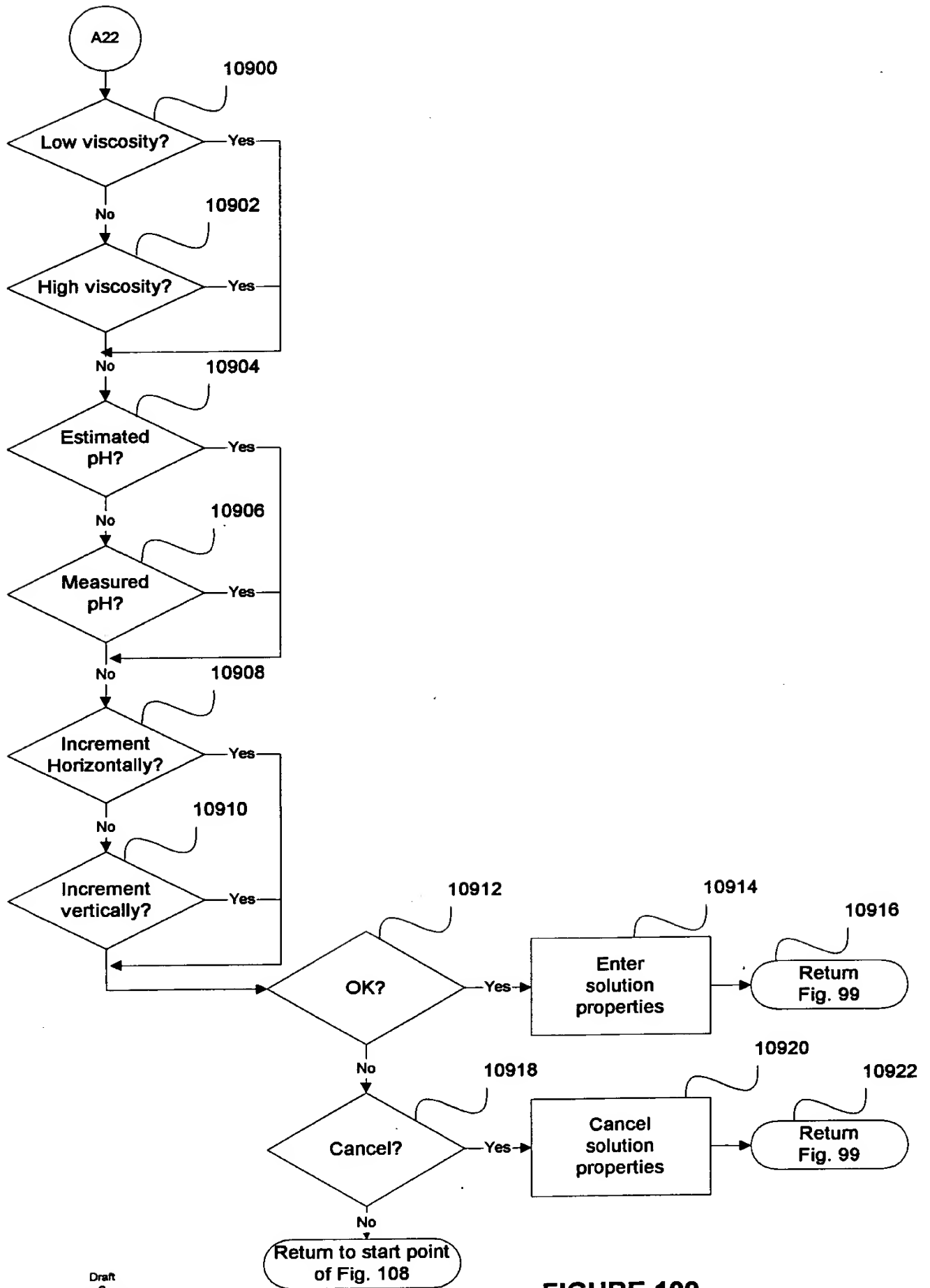


FIGURE 108



**FIGURE 109**

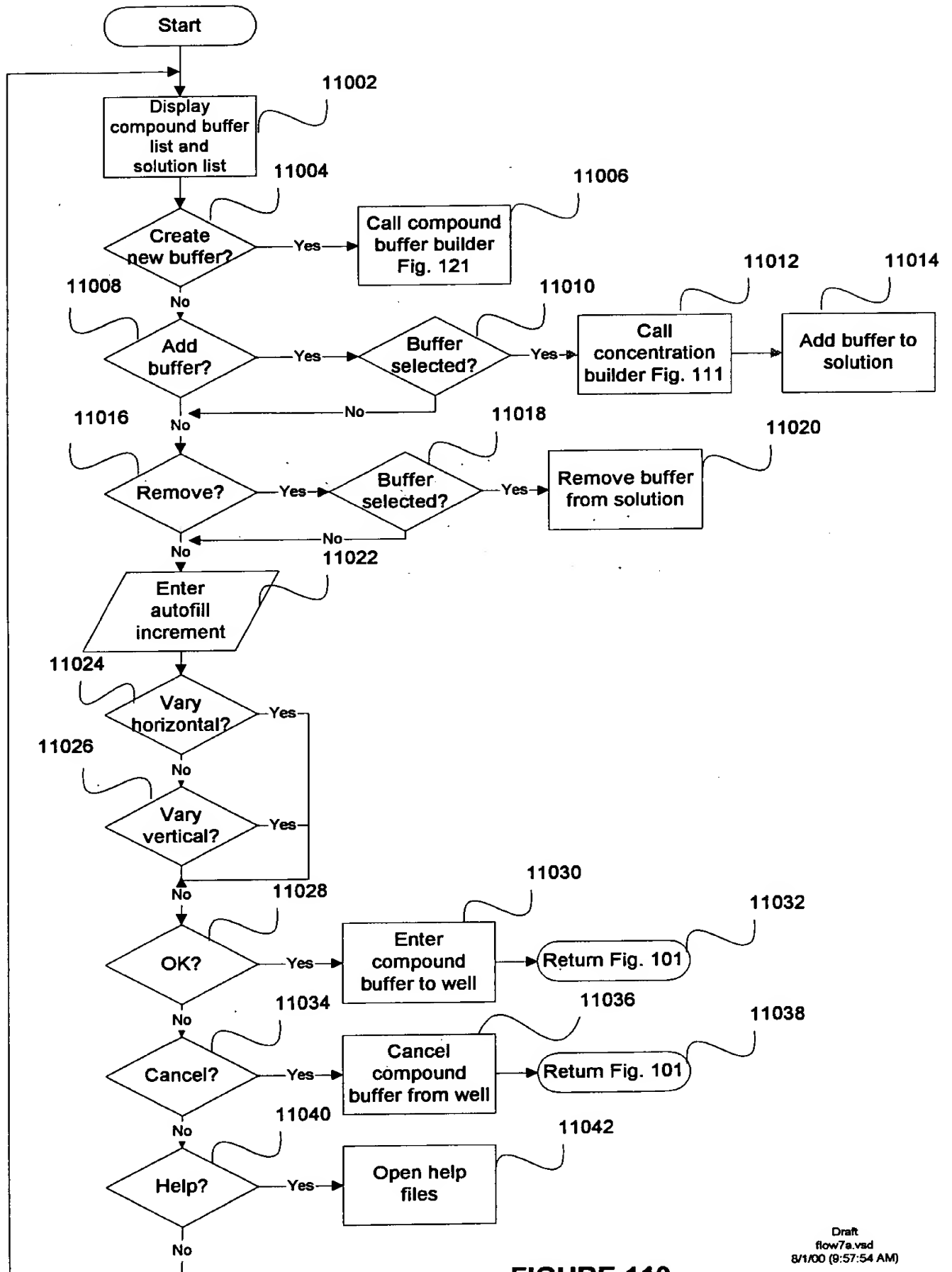


FIGURE 110

0963143-030200

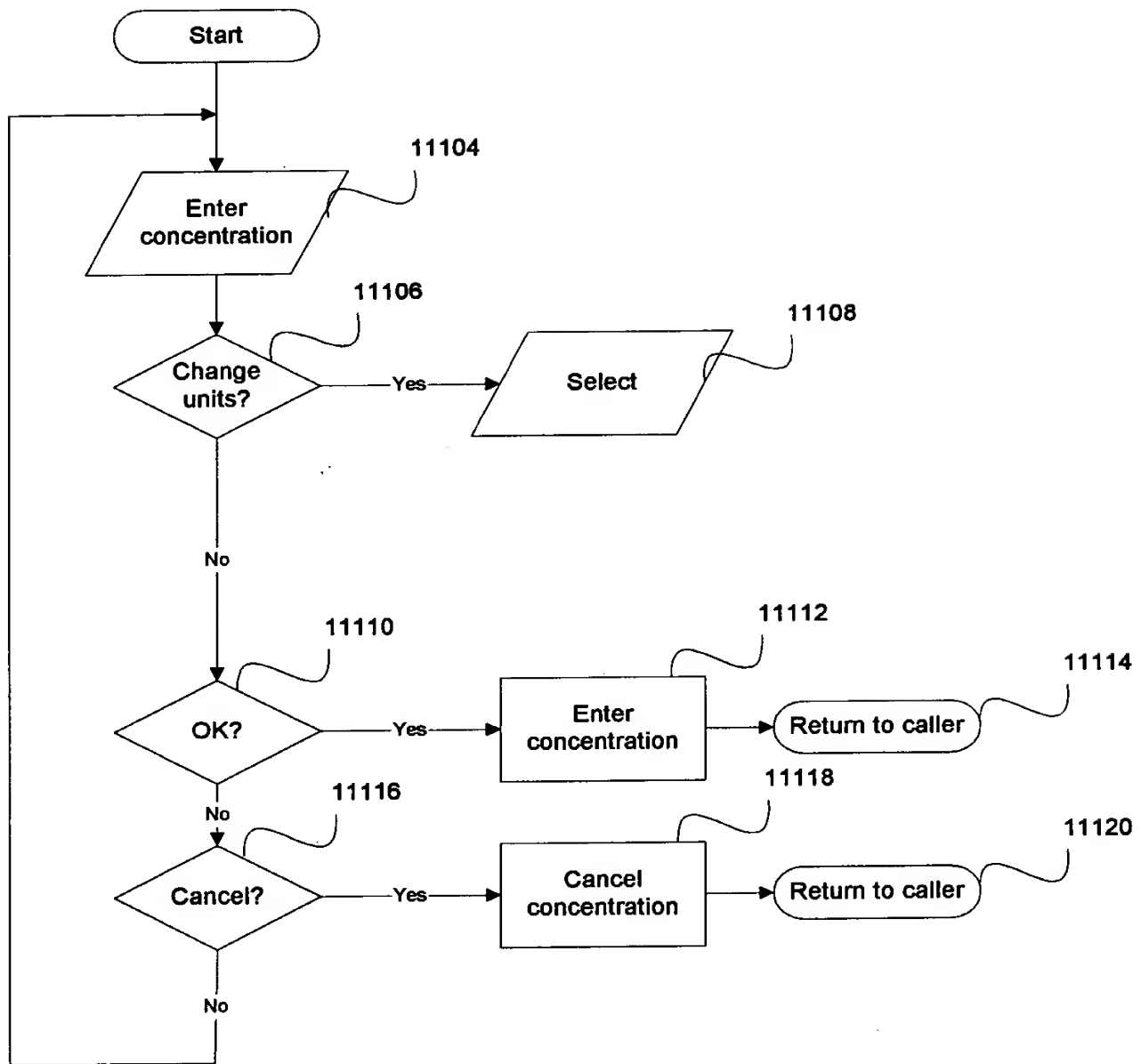
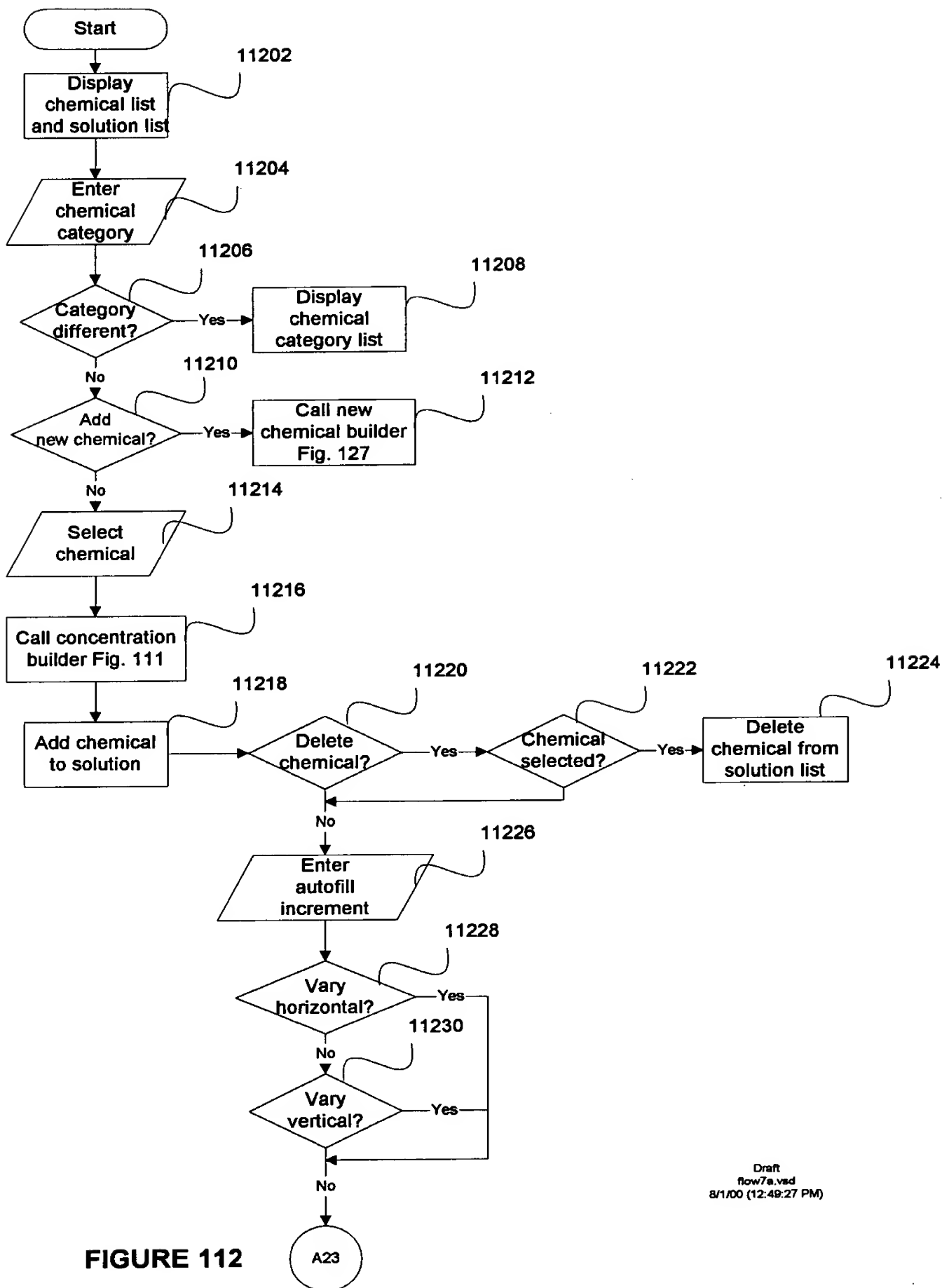


FIGURE 111



002080" 53T E950



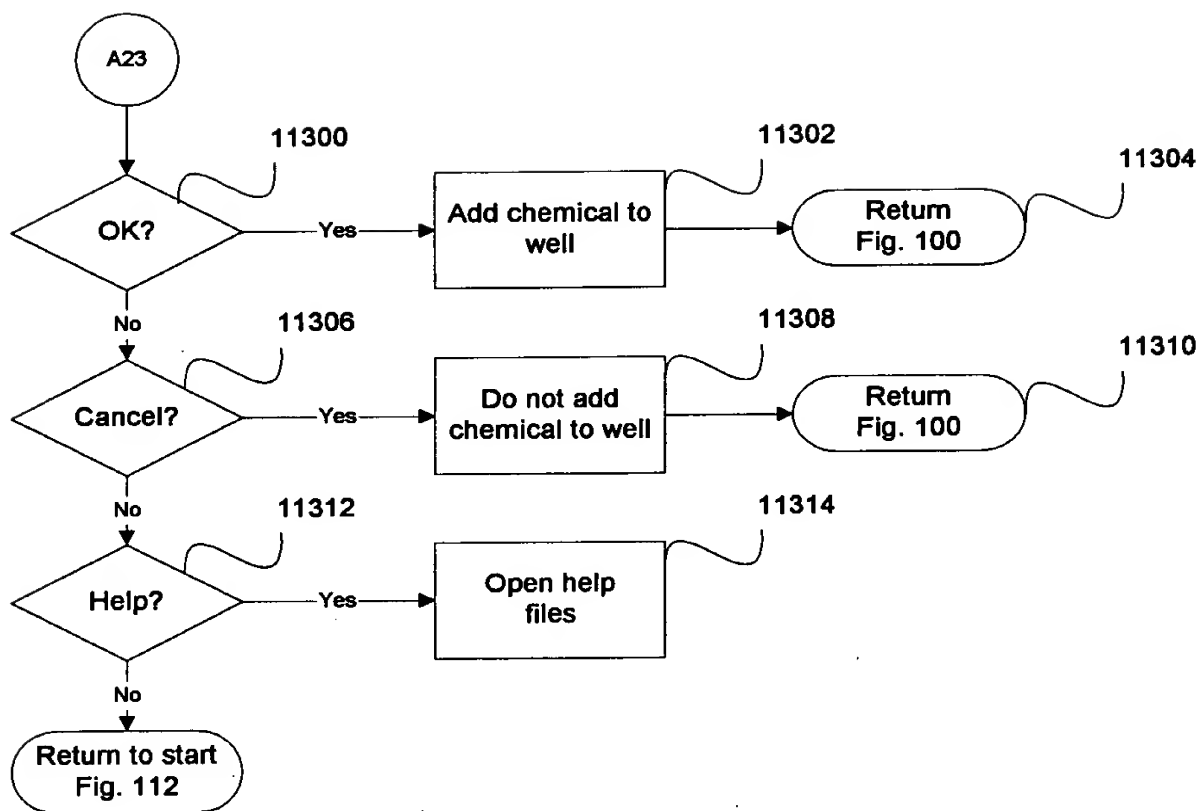


FIGURE 113

002030" 587E960

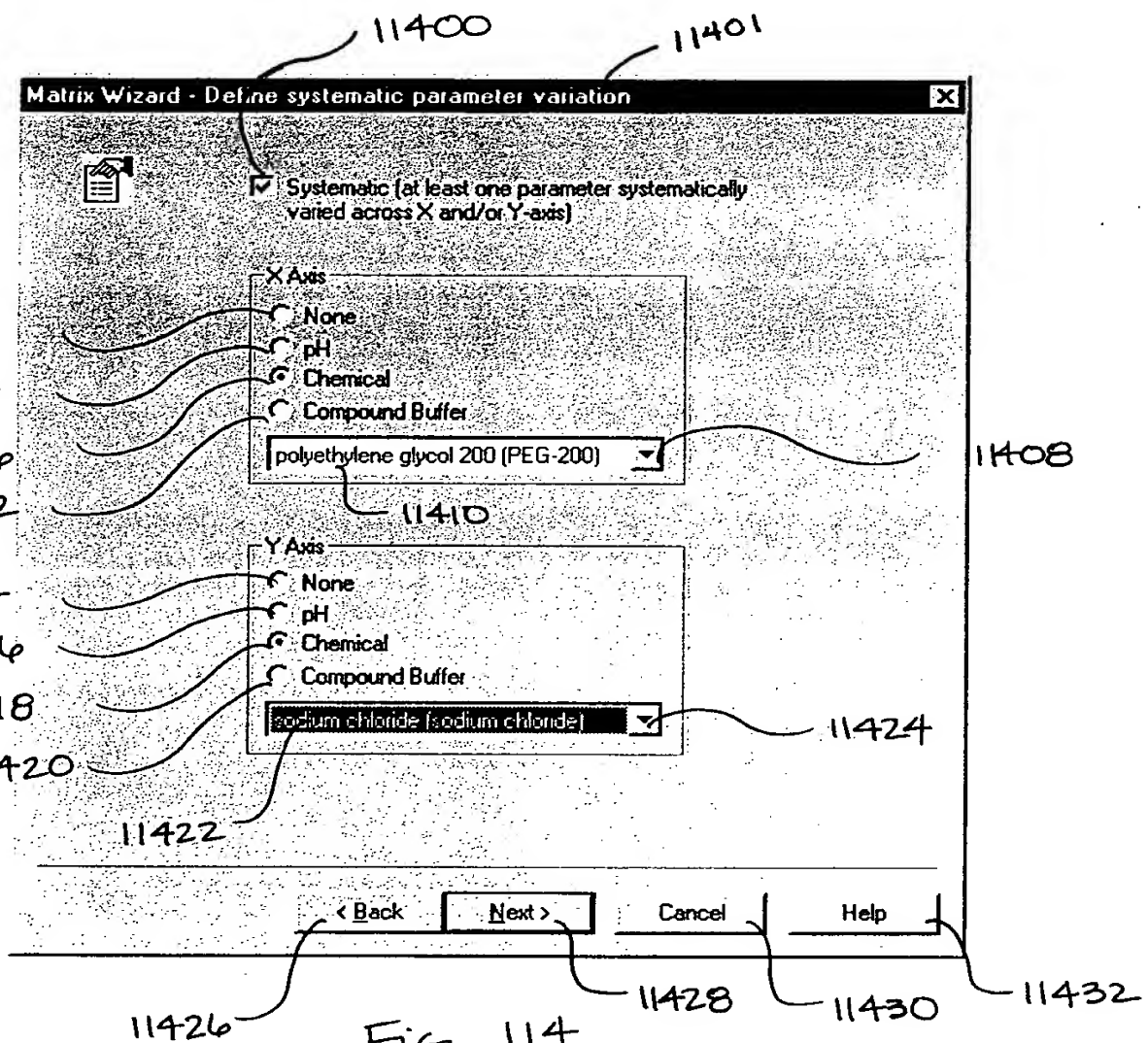
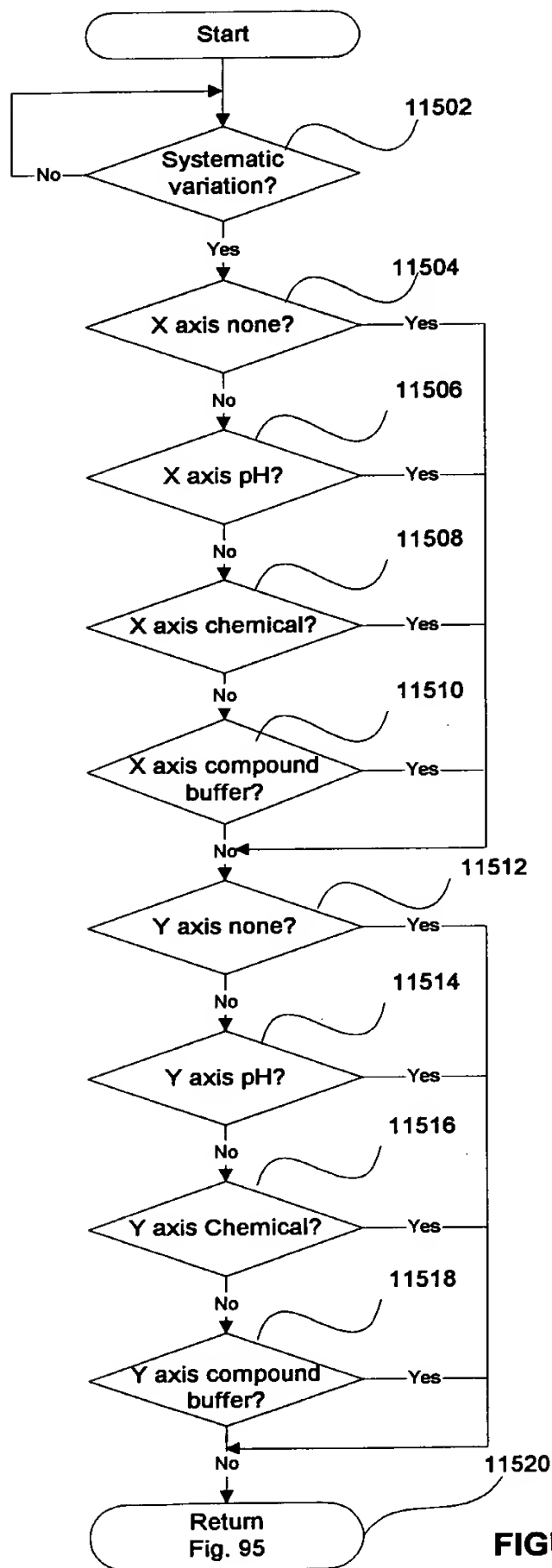


Fig. 114

002080" 59T E960



**FIGURE 115**

002080" 58TFE960

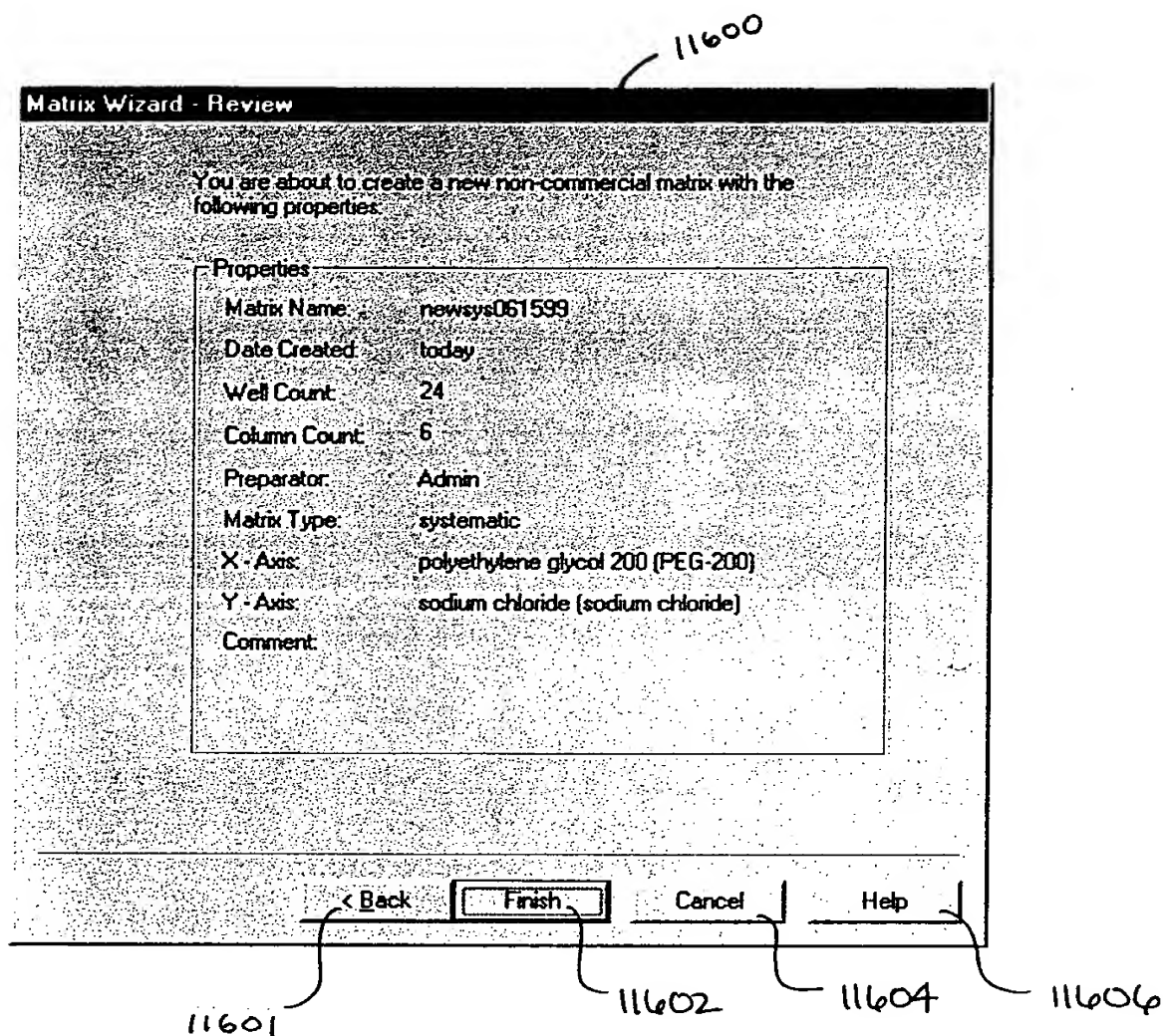
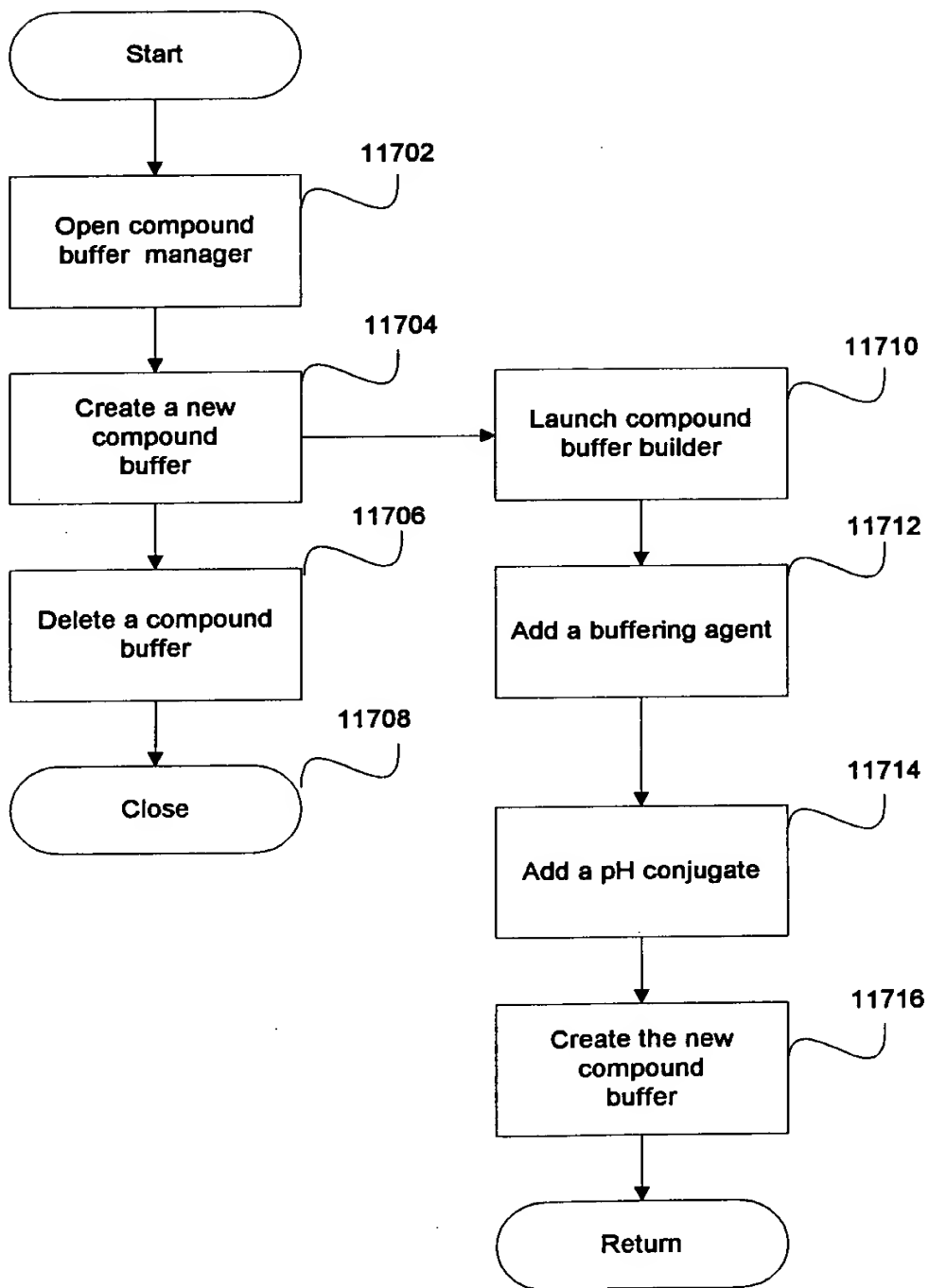


Fig. 116



**FIGURE 117**

H<sup>+</sup>

11800

## H<sup>+</sup> Compound Buffer Manager

Buffer PH	Buffering Agent (Full name)	Buf Agent (abbr)	Buf Agent (Mnft)
H <sup>+</sup> 4.20	sodium phosphate dibasic	Na2 H phosphate	Sigma Chemica
H <sup>+</sup> 4.50	acetic acid	acetic acid	Sigma Chemica
H <sup>+</sup> 4.60	sodium acetate trihydrate	NaAc	Hampton Rese:
H <sup>+</sup> 5.50	sodium cacodylic acid trihydrate	Na cacodylate	Hampton Rese:
H <sup>+</sup> 5.50	sodium citrate dihydrate	Na3 citrate	Sigma Chemica
H <sup>+</sup> 5.60	sodium citrate dihydrate	Na3 citrate	Hampton Rese:
H <sup>+</sup> 5.60	2-morpholinoethanesulfonic acid	MES	Hampton Rese:
H <sup>+</sup> 6.00	sodium cacodylic acid trihydrate	Na cacodylate	Hampton Rese:
H <sup>+</sup> 6.00	2-morpholinoethanesulfonic acid	MES	Hampton Rese:
H <sup>+</sup> 6.00	(2-N-morpholino)ethanesulfonic acid	MES	Sigma Chemica
H <sup>+</sup> 6.20	sodium phosphate dibasic	Na2 H phosphate	Sigma Chemica
H <sup>+</sup> 6.50	sodium dimethylarsinic acid	Na cacodylate	Sigma Chemica
H <sup>+</sup> 6.50	n-(2-acetamido)iminodiacetic acid	ADA	Hampton Rese:
H <sup>+</sup> 6.50	sodium citrate dihydrate	Na3 citrate	Hampton Rese:
H <sup>+</sup> 6.50	1,3-diaza-2,4-cyclopentadiene	imidazole	Hampton Rese:
H <sup>+</sup> 6.50	sodium cacodylic acid trihydrate	Na cacodylate	Hampton Rese:
H <sup>+</sup> 6.50	2-morpholinoethanesulfonic acid	MES	Hampton Rese:

11808  
11802  
11804  
11806

New...  
Delete  
Help  
Close

Fig. 118

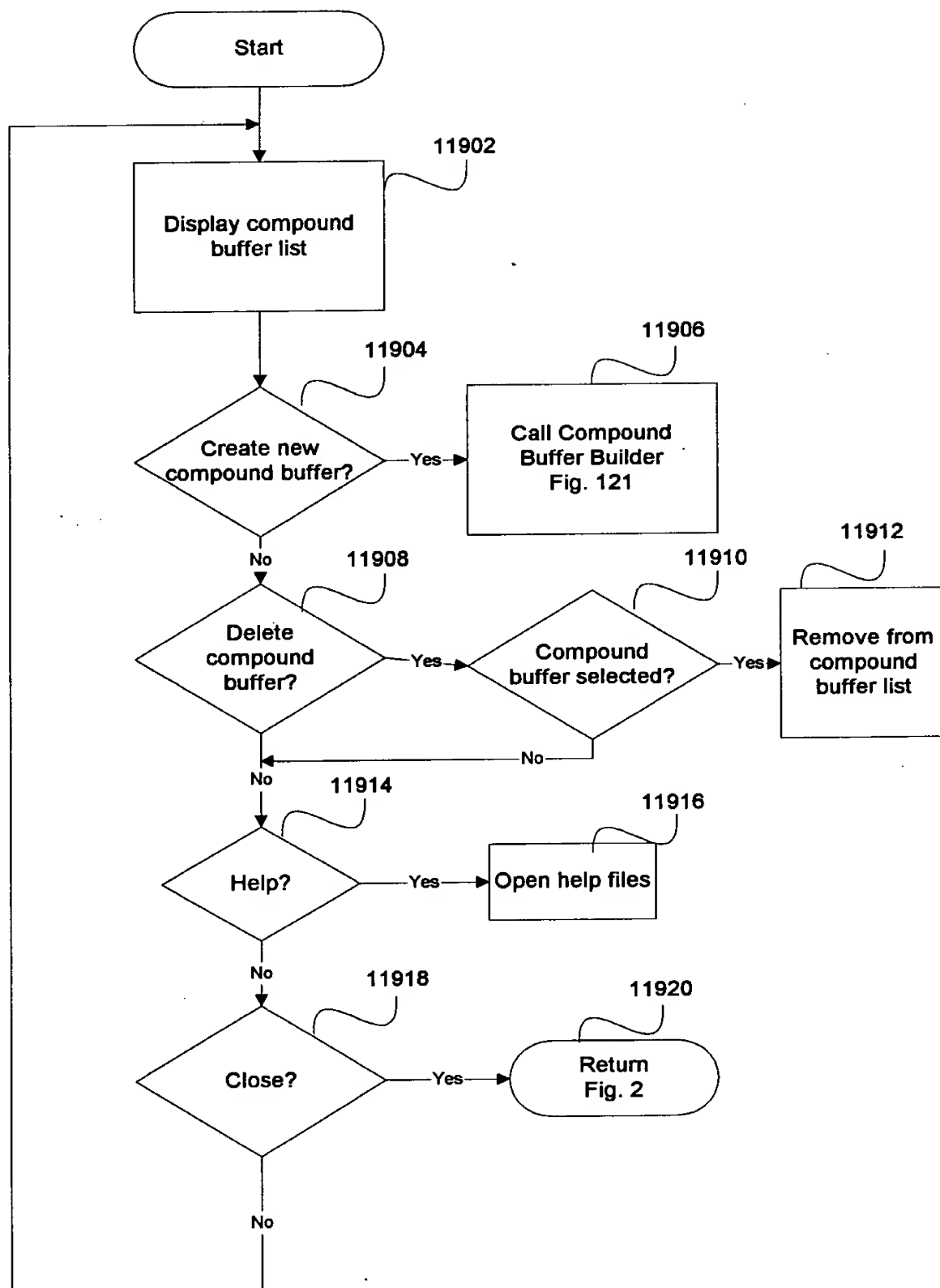


FIGURE 119



**Compound Buffer Builder**

**Buffering Agent List**

Chemical Name	Abbreviation
acetic acid	acetic acid
cetyl trimethylammonium bromide	CTAB
citric acid monohydrate	citric acid
di-sodium hydrogen phosphate, dibasic	Na2 H phosphate

**pH Conjugate (Counter Ion) List**

Chemical Name	Abbreviation
potassium dihydrogen phosphate, mon...	K H2 phosphate
sodium acetate	NaAc
sodium acetate trihydrate	NaAc
sodium cacodylic acid trihydrate	Na cacodylate

**Compound Buffer**

**Buffering Agent:**

Name: acetic acid  
Abbr: acetic acid (C2H4O2)  
Mass: 60.05 Da  
Mfctr: Sigma Chemical Co.

**Counter Ion:**

Name: sodium acetate  
Abbr: NaAc (NaC2H3O2)  
Mass: 82.03 Da  
Mfctr: Sigma Chemical Co.

Buffer pH (1..14): 4.9

Comment: acetate buffer pH 4.9

**Help**

A Buffer is composed of exactly one Buffering Agent and exactly one pH Conjugate (Counter Ion). Double click on a Buffering Agent or pH Conjugate to copy the chemical to the right pane.

Commit

Cancel

Help...

Fig. 120

09631185.080200

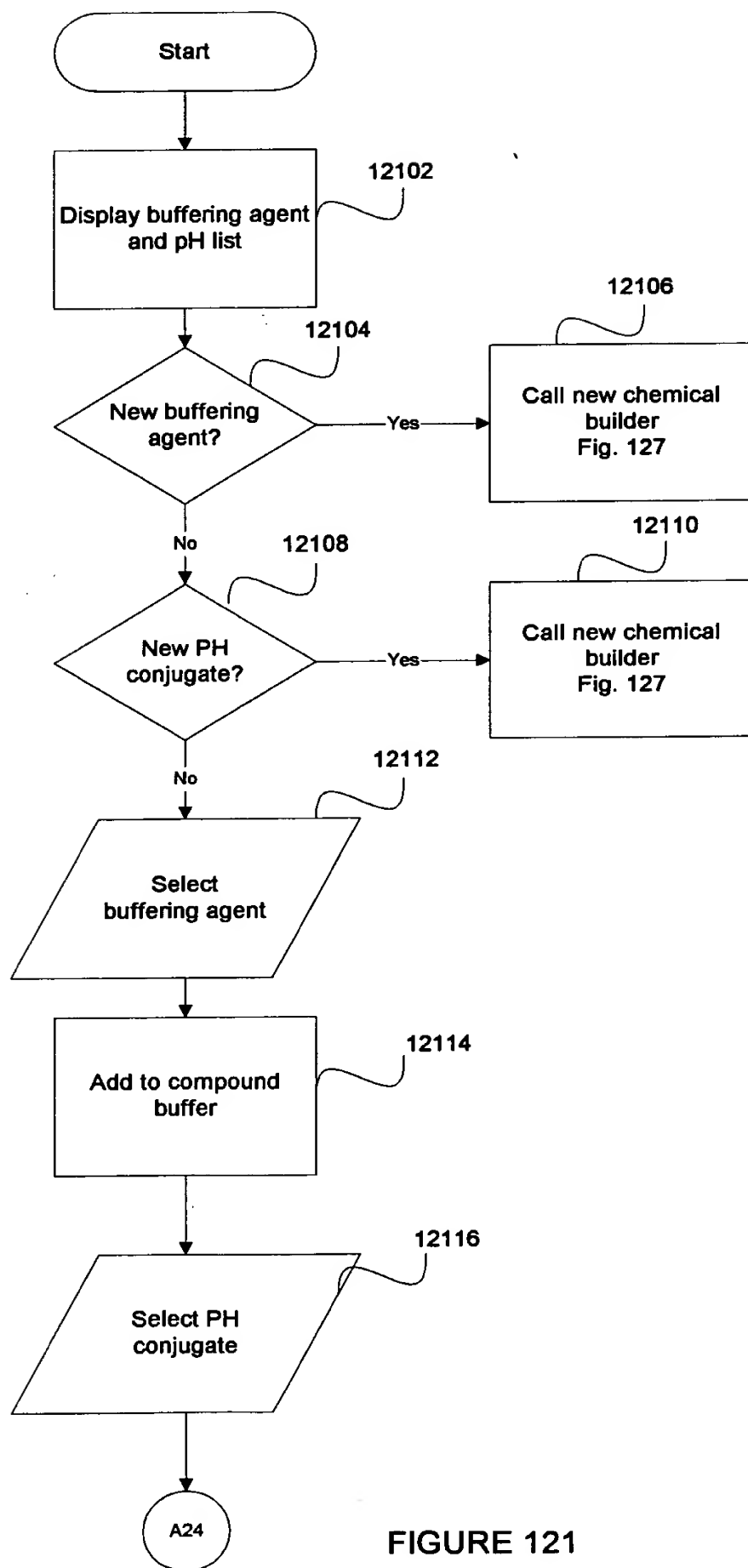


FIGURE 121

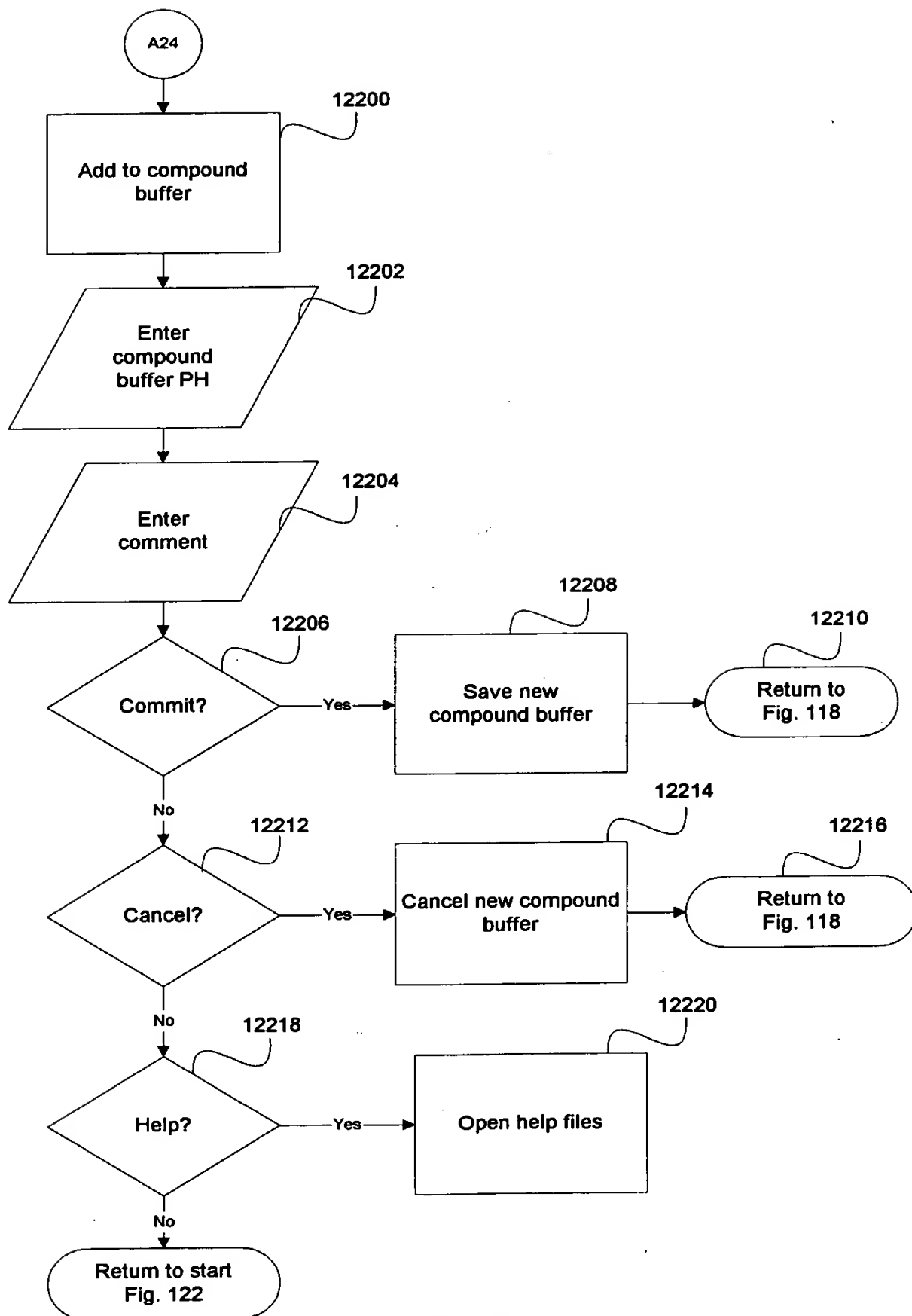


FIGURE 122

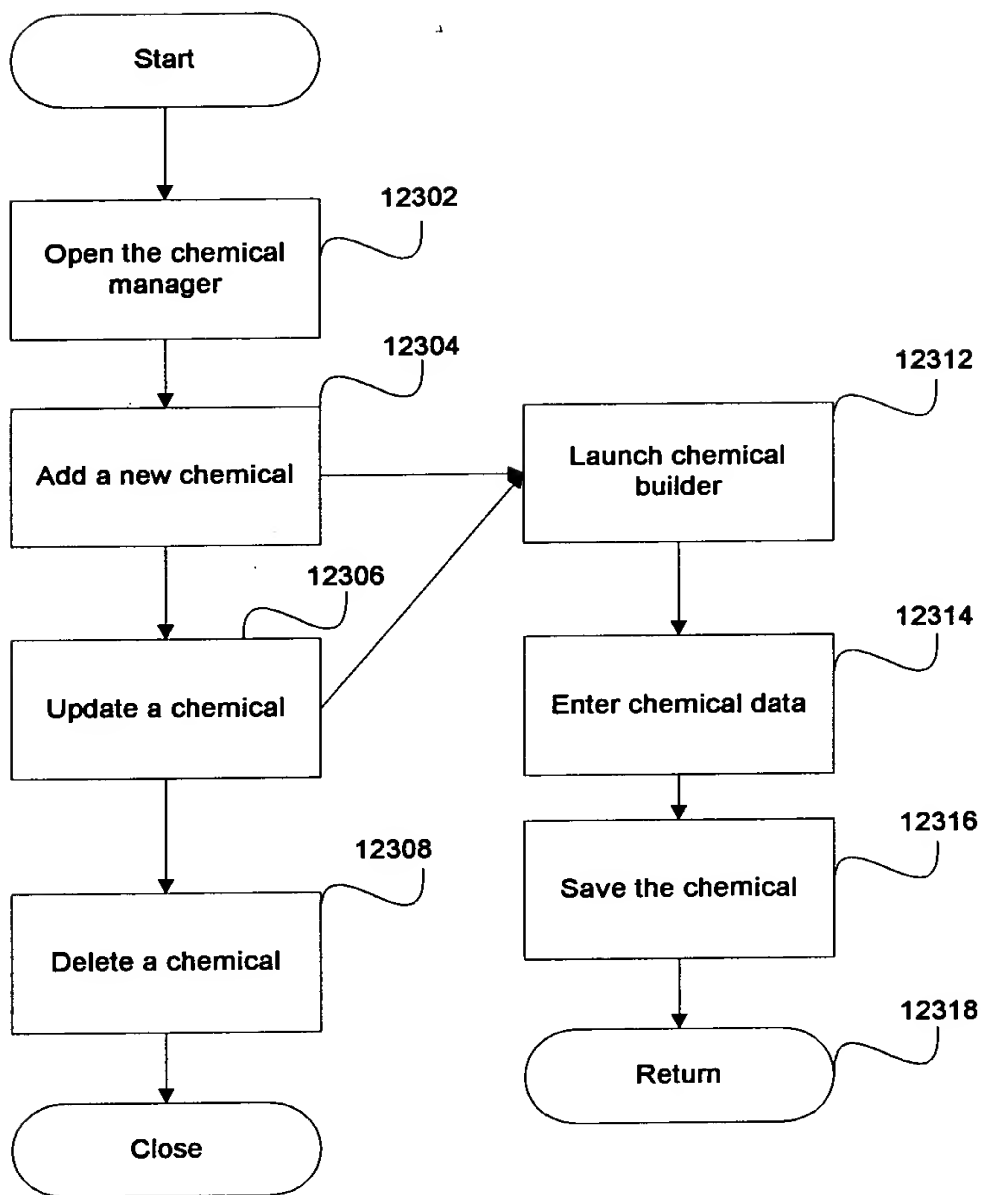


FIGURE 123



002080"587E960

12400 12404 12406 12408

12401

12410

12402

12412

## Chemical Manager

Category:

- Buffering Agent
- Chelator
- CryoCoolant
- CSI
- Detergent
- Gas
- HeavyAtomCompound
- Metal
- NucleationSuppressant
- Organic
- Other
- pHConjugate
- Precipitant**
- ReducingAgent
- Salt
- Solvent

New... Update... Delete Help...

Chemical Name	Abbr	Formula	Molecular Mass
1,2,3-heptanetriol	heptanetriol	C7H16O3	148.200 Da
1,2-propanediol	1,2-propanediol	C3H8O2	76.100 Da
1,2-propanediol	1,2-propanediol	C3H8O2	76.100 Da
1,4-butanediol	1,4-butanediol	C4H10O2	90.120 Da
1,4-dioxane	dioxane	C4H8O2	88.110 Da
1,6-hexanediol	hexanediol	C6H14O2	118.180 Da
2,5 hexanediol	hexanediol	CH3CH(OH)CH2...	118.180 Da
2,5-hexylene glycol	2,5-hexanediol	C6H14O2	118.180 Da
2-ethoxyethanol	2-ethoxyethanol	C4H10O2	90.120 Da
2-methyl-2,4-pentaned...	MPD	C6H14O2	118.180 Da
2-methyl-2,4-pentaned...	MPD	C6H14O2	118.180 Da
2-propanol	isopropanol	C3H8O	60.100 Da
2-propanol	isopropanol	C3H8O	60.100 Da
2-propanol	isopropanol	C3H8O	60.100 Da
2-propanol	isopropanol	C3H8O	60.100 Da

Select a chemical and click one of the top buttons or double click on a chemical to update.

Close

FIG. 124

002080-58TTE960 09631185-080200

12501 12510

12501 12502 12504 12506 12514 12516 12522 12524

12524p 12512 12508 12520 12518 12528 12530

New Chemical

Name: ammonium sulfate

Abbr: (NH4)2SO4

Formula: (NH4)2SO4

Mass: 132.1 Da

Chemical Type: Precipitant

Density (g/ml):

Manufacturer: Sigma Chemical Co.

Catalog: A4915

CAS: 7783-20-2

State

☐ Gas

☐ Liquid

☒ Solid

Warning

Catalog and CAS cannot be updated, once they have been entered, since they are the primary key for the chemical entity.

OK

Cancel

STOP

FIG. 125

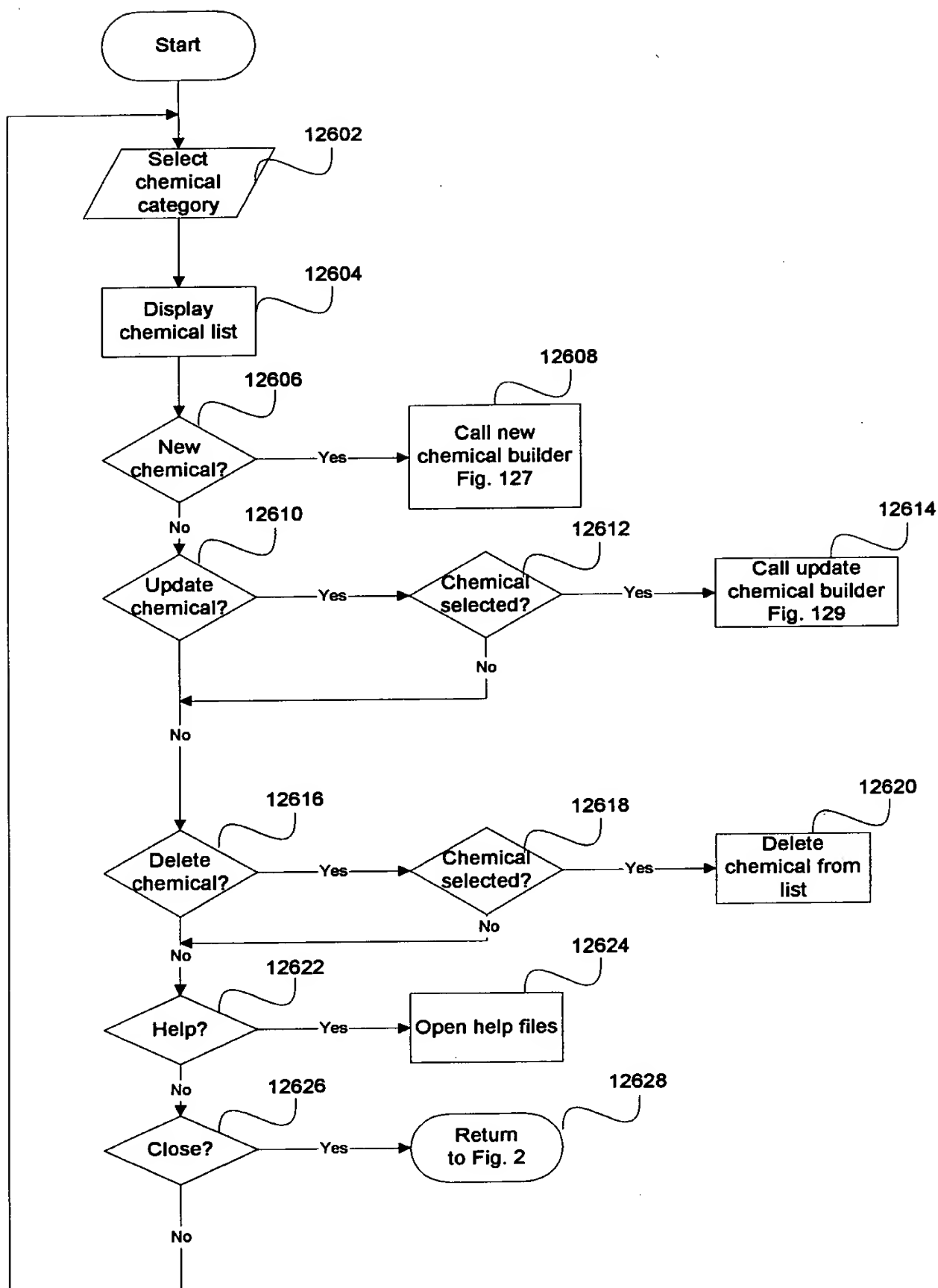


FIGURE 126

09631135-080200

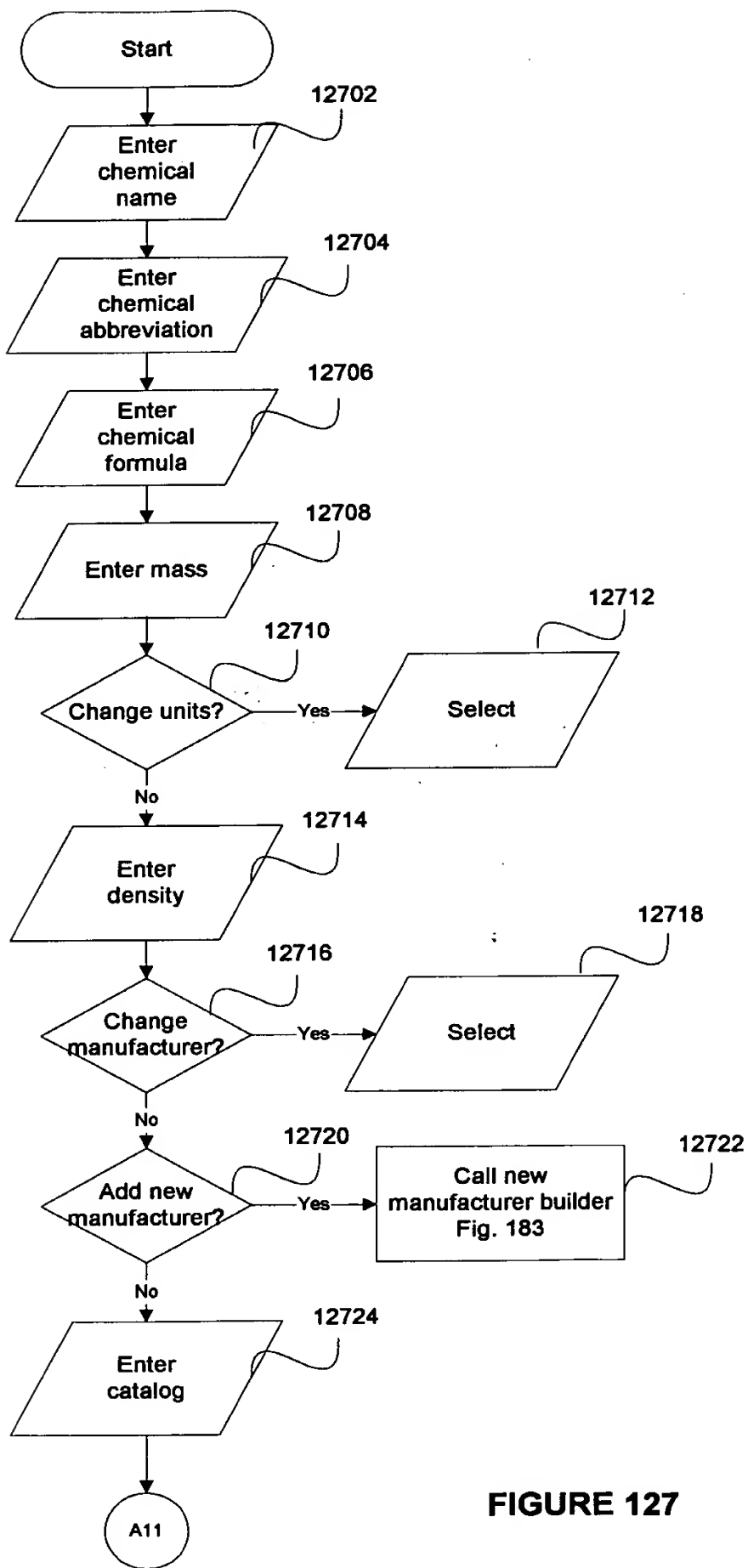


FIGURE 127



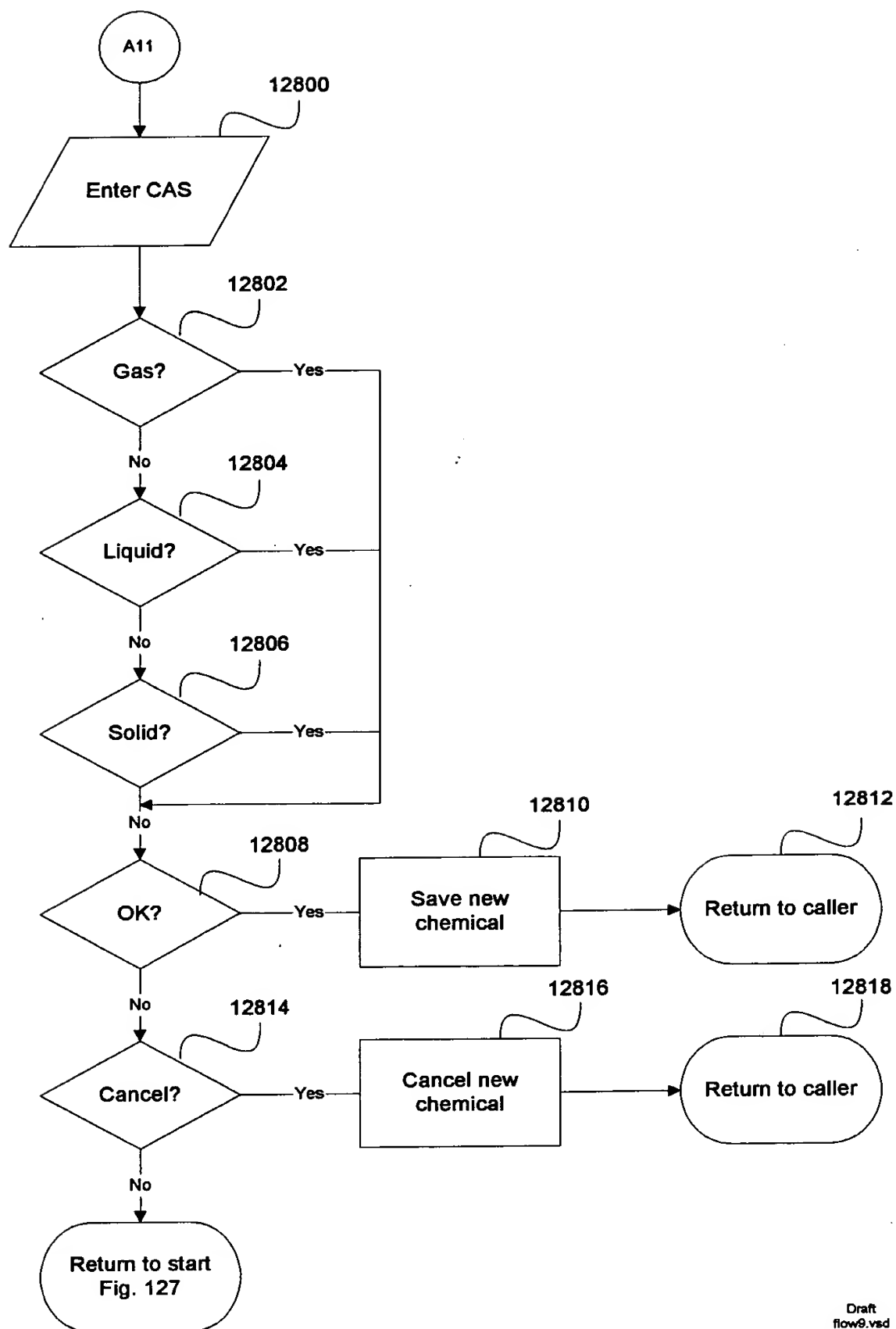


FIGURE 128

002030" 58TTE960

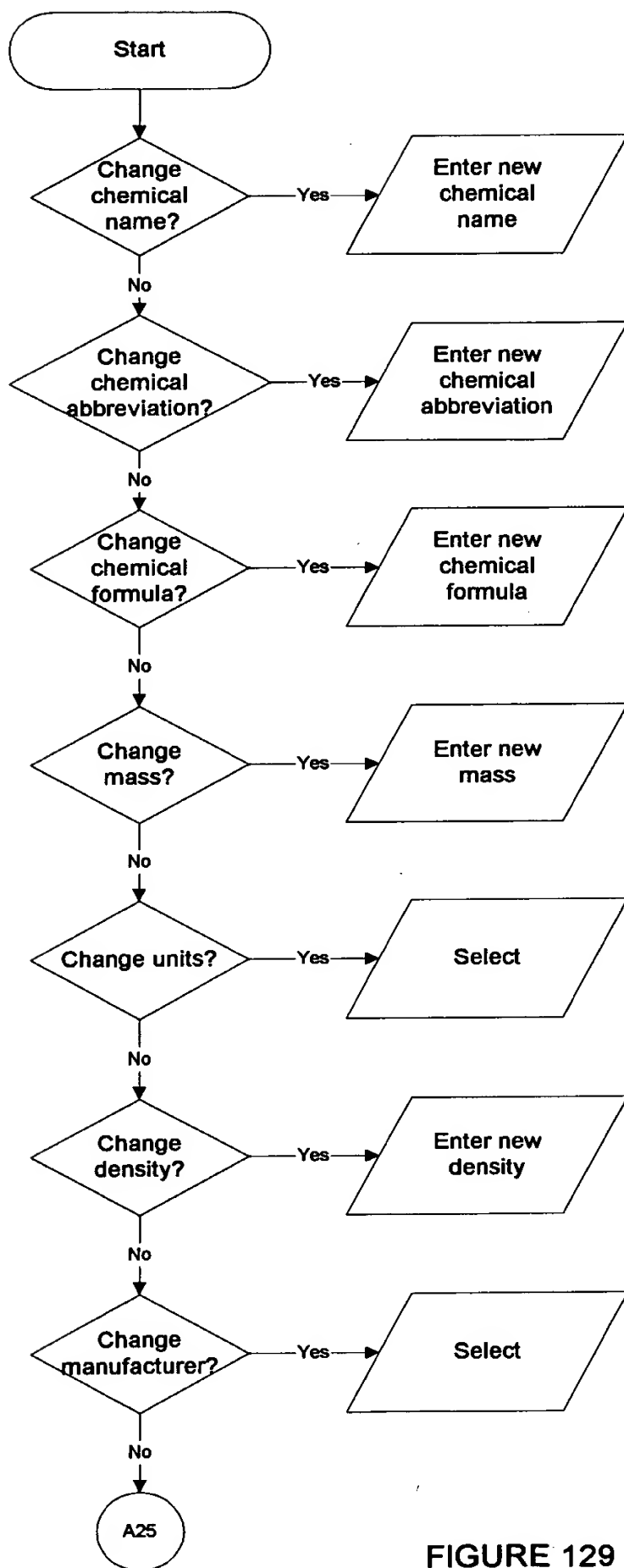


FIGURE 129

002080" 5377E960

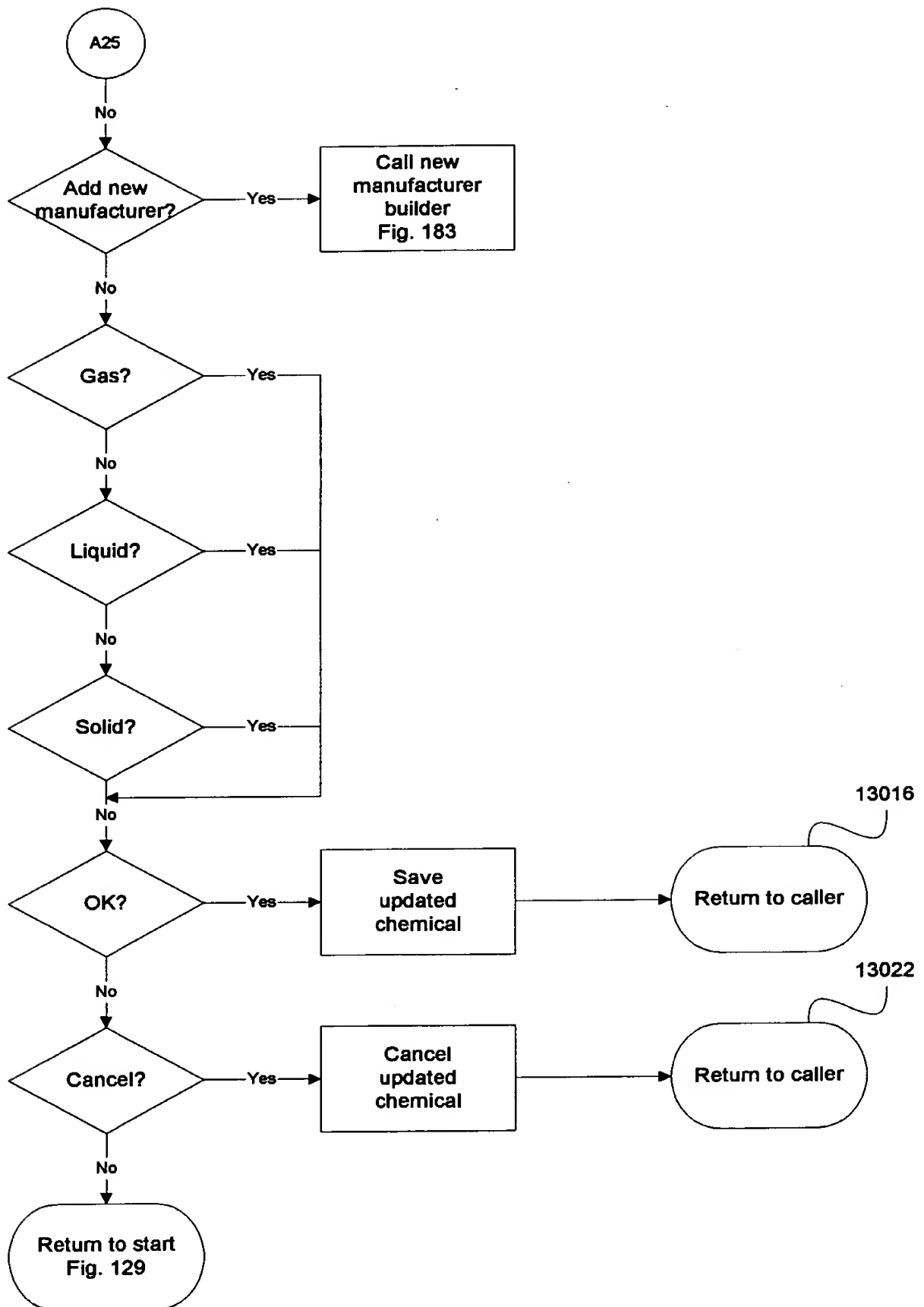


FIGURE 130

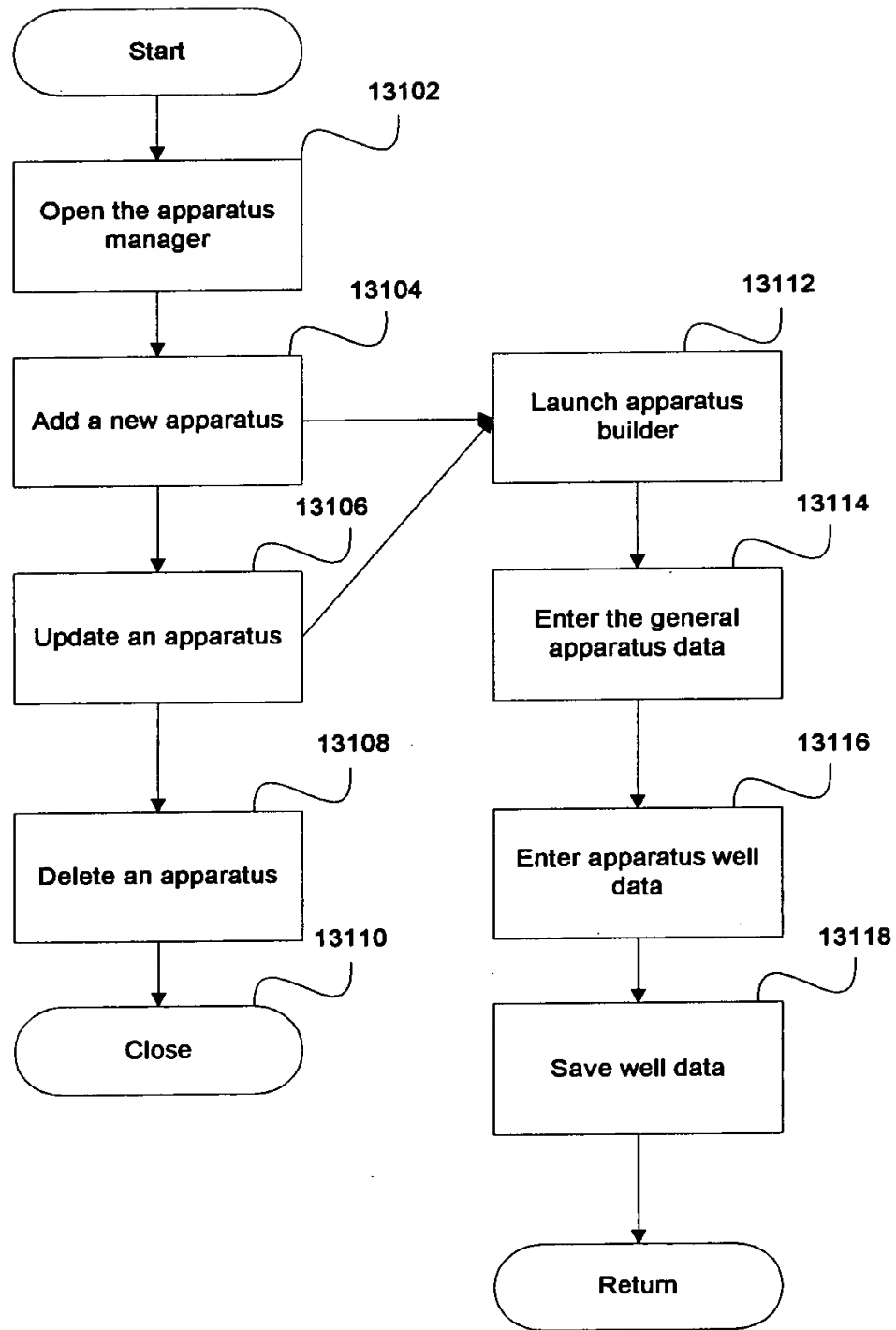


FIGURE 131

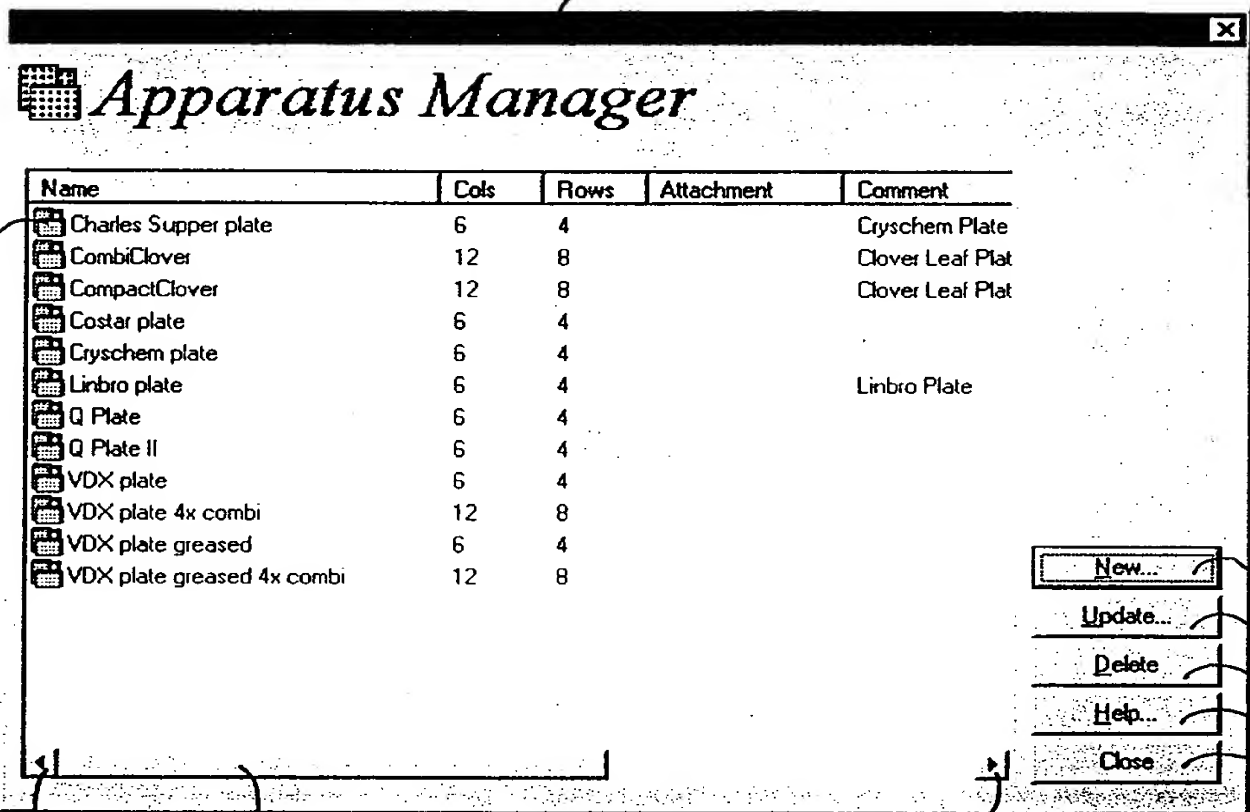


Fig. 132

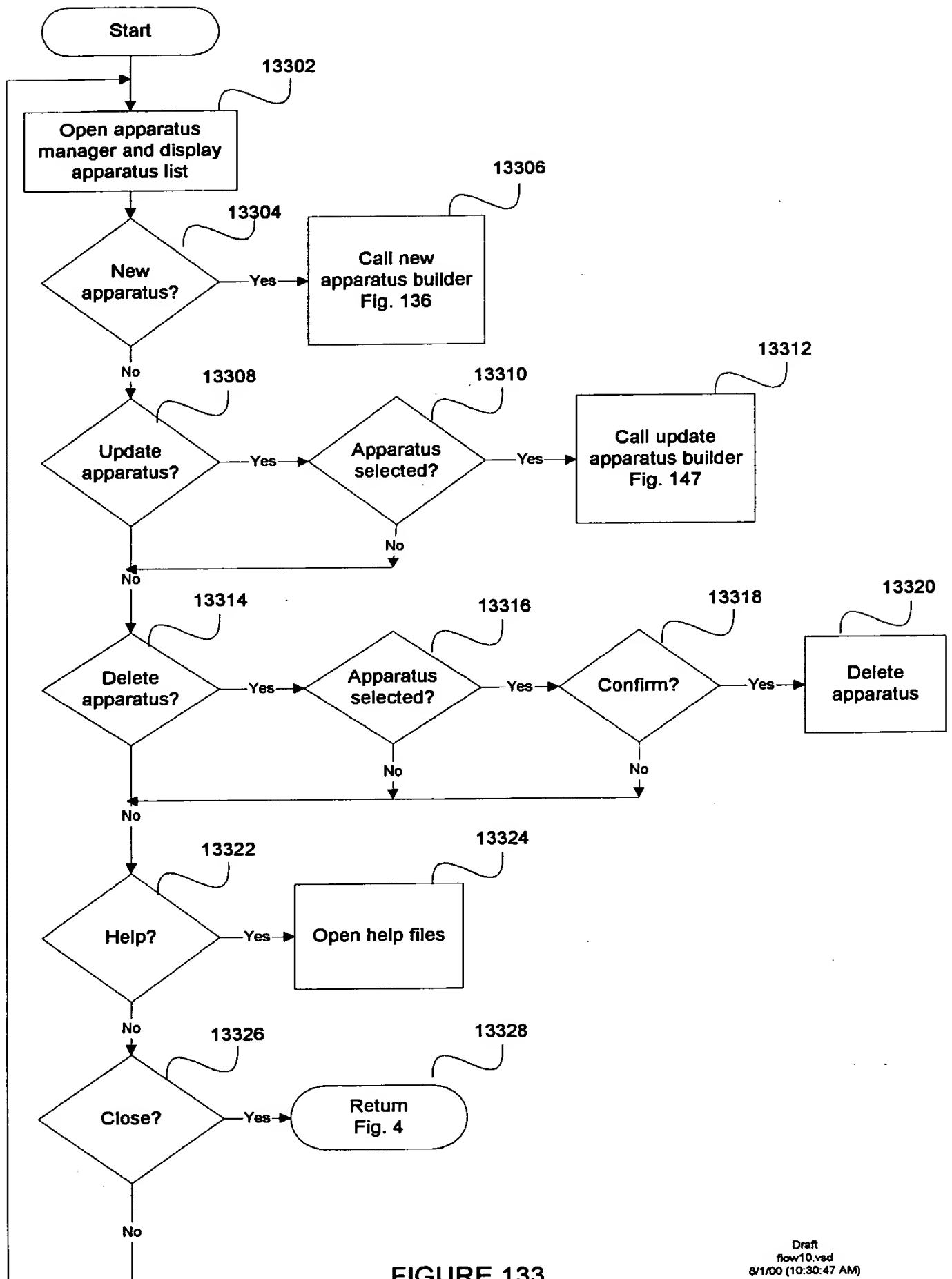


FIGURE 133

002080"ESTTE960

13401 13402 13400

New Apparatus

General apparatus data | Apparatus well data

13404 Name: CombiClover Jr.

13406 13410 Manufacturer: Emerald BioStructures, Inc. 13408

Columns: 8 Rows: 6 13419 E:\crymon\Help\crystalmonitor\images\coml

13412

Type: ☒ Crystallization ☐ Tube Rack

13414 Base dim (x,y,z): 112 75 20

13418 Comment: 48-well CombiClover Jr. plate with standard microtiter plate footprint

Help

For more detailed help, please click the help button.

OK Cancel Help... 13424

13420 13422

FIG. 134

002080" SETTE60

13500

**New Apparatus** [X]

General apparatus data | Apparatus well data

AutoFill... 13501

1 x y z Drop: Res: Drop Diameter: Res Diameter: Max Vol Drop: Max Vol Res:	2 x y z Drop: Res: Drop Diameter: Res Diameter: Max Vol Drop: Max Vol Res:	3 x y z Drop: Res: Drop Diameter: Res Diameter: Max Vol Drop: Max Vol Res:	4 x y Drop: Res: Drop Diameter: Res Diameter: Max Vol Drop: Max Vol Res:
9 x y z Drop: Res: Drop Diameter: Res Diameter: Max Vol Drop: Max Vol Res:	10 x y z Drop: Res: Drop Diameter: Res Diameter: Max Vol Drop: Max Vol Res:	11 x y z Drop: Res: Drop Diameter: Res Diameter: Max Vol Drop: Max Vol Res:	12 x y Drop: Res: Drop Diameter: Res Diameter: Max Vol Drop: Max Vol Res:
17 x y z Drop:	18 x y z Drop:	19 x y z Drop:	20 x y Drop:

13506

OK Cancel Help... 13502 13504

FIG. 135



09631185.030200

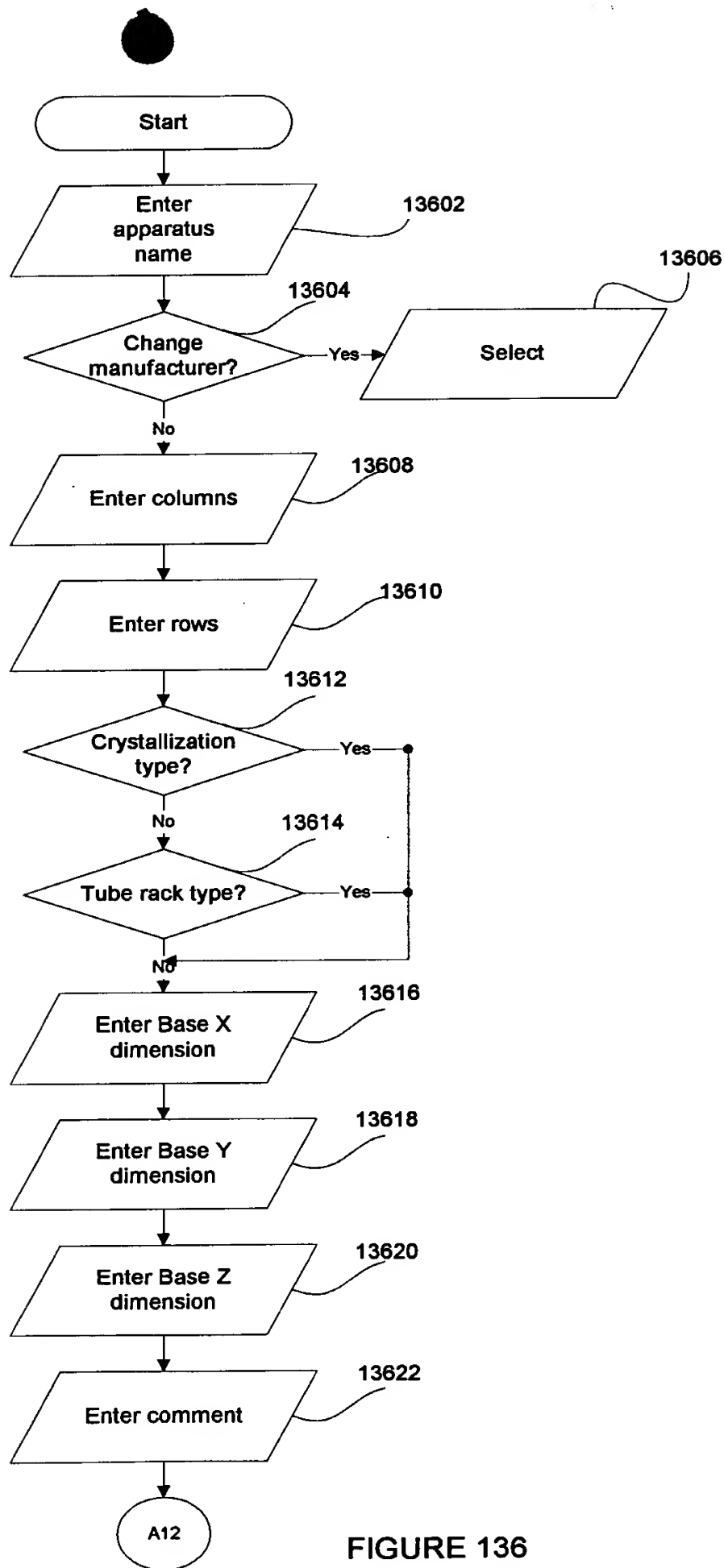


FIGURE 136

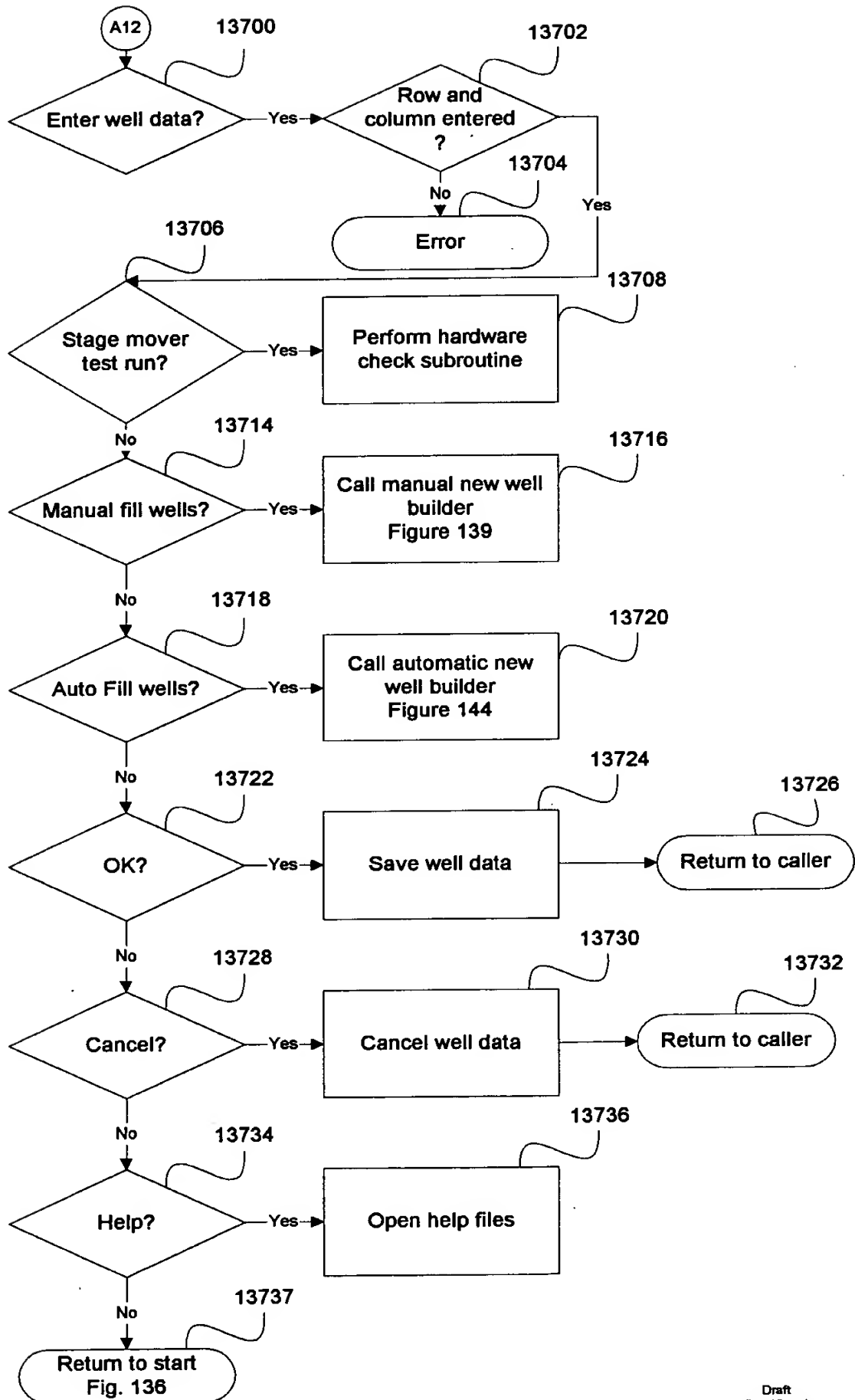


FIGURE 137

002080"581E950

13800

Updating Well # 1

Well coordinates in millimeter (mm)

	X	Y	Z	Diameter
Drop chamber:	10	5	5	5
Res. Chamber:	15	10	20	10

Volume

Max Vol Drop Chamber:	30	$\mu$ l	<input checked="" type="checkbox"/>
Max Vol Res. Chamber:	1000	$\mu$ l	<input checked="" type="checkbox"/>

Help...

OK

Cancel

13804 13808 13801 13806 13809 13810 13812 13802 13814 13820 13818 13816 13822 13824 13826

Fig. 138

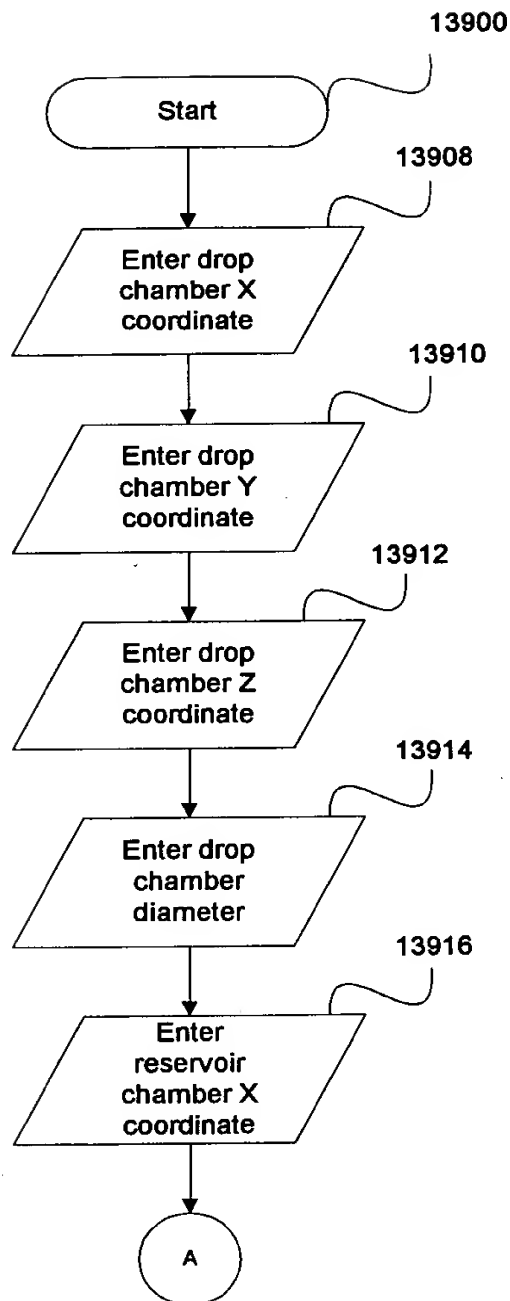


FIGURE 139

002080" 5877E960

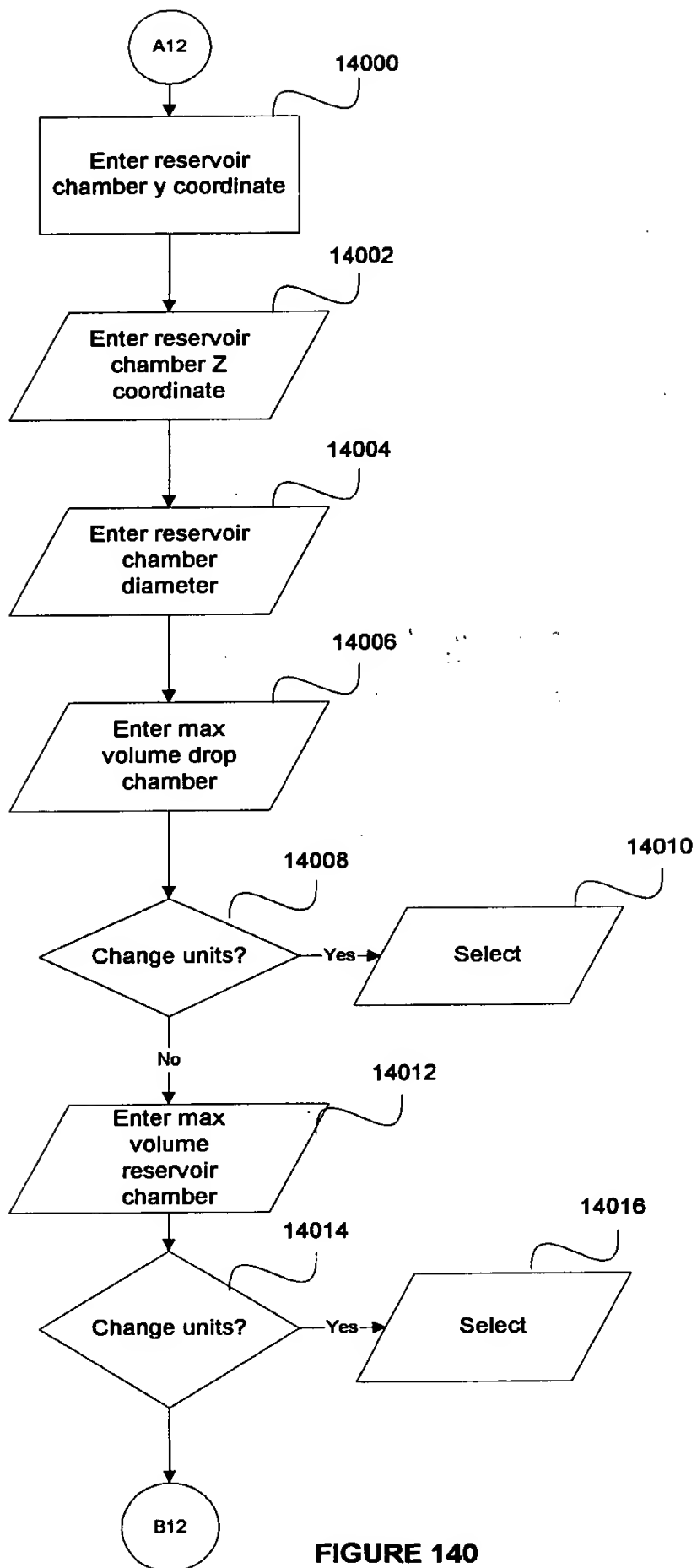


FIGURE 140

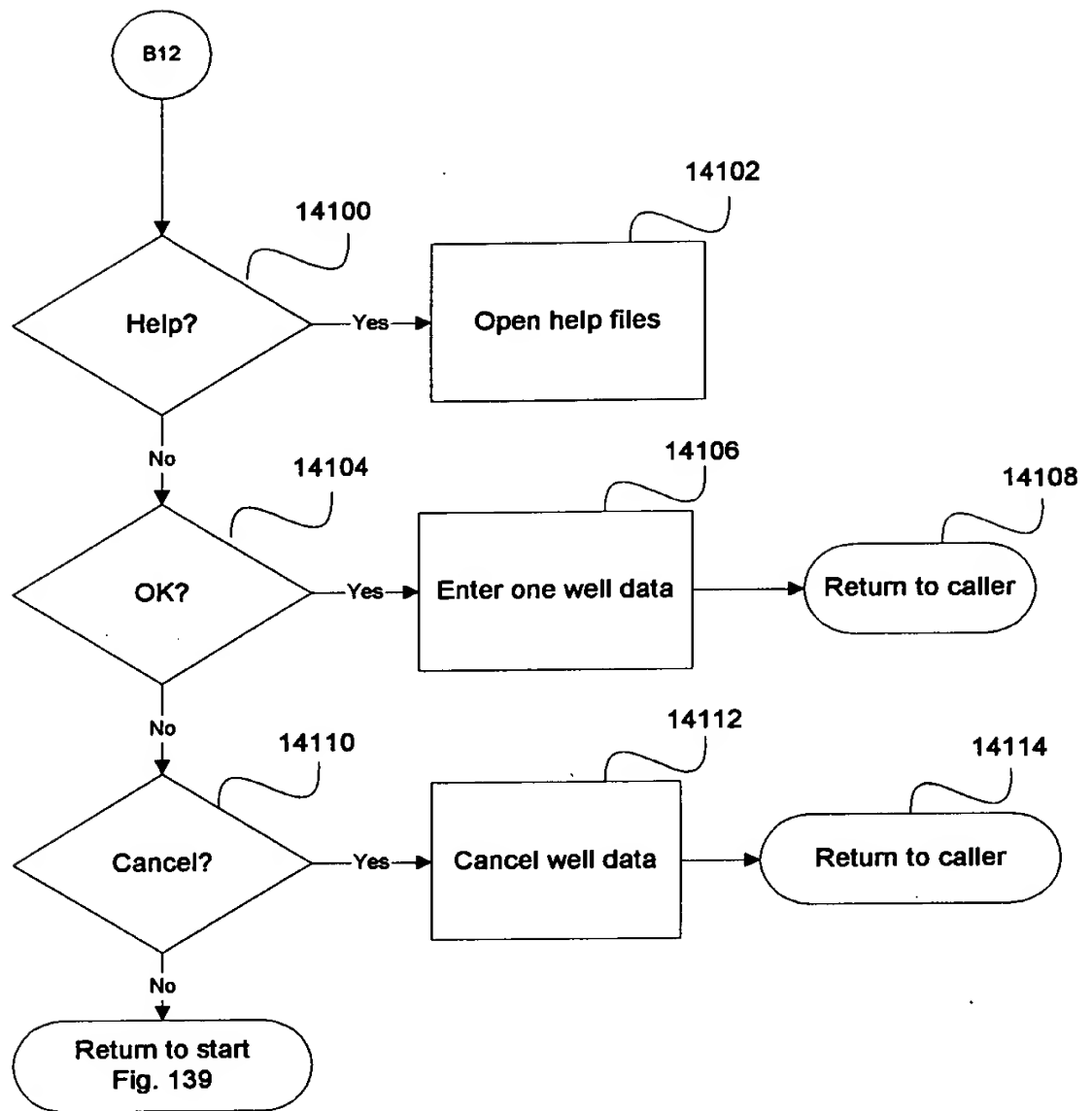


FIGURE 141

14201 14204 14200

### Autofill Apparatus Coordinates

Chamber coordinates in millimeter

	Drop	Reservoir
(1)	15	20
(2)	5	10
(3)	5	20
(4)	15	15
(5)	15	15
Diam.	5	10

14202 14206

Max Chamber Volume

Drop:	30	$\mu$ l	<input checked="" type="checkbox"/>
Reservoir:	1000	$\mu$ l	<input checked="" type="checkbox"/>

14208 14212 14210 14216 14214 14218

Hint

Autofill helps reducing to enter all the coordinates to fully describe a plate. It assumes that the plate has symmetric attributes, so that the above coordinates describe the plate uniquely. You can overwrite coordinates afterwards by double clicking on a well.

Help... 14220  
OK 14222  
Cancel 14224

Fig. 142

002080" SITE 960

**New Apparatus** [X]

General apparatus data | Apparatus well data

AutoFill...

<b>1</b> <table border="1"> <thead> <tr> <th>x</th> <th>y</th> <th>z</th> </tr> </thead> <tbody> <tr> <td>Drop: 15</td> <td>5</td> <td>5</td> </tr> <tr> <td>Res: 20</td> <td>10</td> <td>20</td> </tr> <tr> <td colspan="3">Drop Diameter: 5</td> </tr> <tr> <td colspan="3">Res Diameter: 10</td> </tr> <tr> <td colspan="3">Max Vol Drop: 30.000 µl</td> </tr> <tr> <td colspan="3">Max Vol Res:</td> </tr> </tbody> </table>	x	y	z	Drop: 15	5	5	Res: 20	10	20	Drop Diameter: 5			Res Diameter: 10			Max Vol Drop: 30.000 µl			Max Vol Res:			<b>2</b> <table border="1"> <thead> <tr> <th>x</th> <th>y</th> <th>z</th> </tr> </thead> <tbody> <tr> <td>Drop: 25</td> <td>5</td> <td>5</td> </tr> <tr> <td>Res: 30</td> <td>10</td> <td>20</td> </tr> <tr> <td colspan="3">Drop Diameter: 5</td> </tr> <tr> <td colspan="3">Res Diameter: 10</td> </tr> <tr> <td colspan="3">Max Vol Drop: 30.000 µl</td> </tr> <tr> <td colspan="3">Max Vol Res:</td> </tr> </tbody> </table>	x	y	z	Drop: 25	5	5	Res: 30	10	20	Drop Diameter: 5			Res Diameter: 10			Max Vol Drop: 30.000 µl			Max Vol Res:			<b>3</b> <table border="1"> <thead> <tr> <th>x</th> <th>y</th> <th>z</th> </tr> </thead> <tbody> <tr> <td>Drop: 35</td> <td>5</td> <td>5</td> </tr> <tr> <td>Res: 40</td> <td>10</td> <td>20</td> </tr> <tr> <td colspan="3">Drop Diameter: 5</td> </tr> <tr> <td colspan="3">Res Diameter: 10</td> </tr> <tr> <td colspan="3">Max Vol Drop: 30.000 µl</td> </tr> <tr> <td colspan="3">Max Vol Res:</td> </tr> </tbody> </table>	x	y	z	Drop: 35	5	5	Res: 40	10	20	Drop Diameter: 5			Res Diameter: 10			Max Vol Drop: 30.000 µl			Max Vol Res:			<b>4</b> <table border="1"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr> <td>Drop: 45</td> <td>5</td> </tr> <tr> <td>Res: 50</td> <td>10</td> </tr> <tr> <td colspan="2">Drop Diameter: 5</td> </tr> <tr> <td colspan="2">Res Diameter: 10</td> </tr> <tr> <td colspan="2">Max Vol Drop: 30.0</td> </tr> <tr> <td colspan="2">Max Vol Res:</td> </tr> </tbody> </table>	x	y	Drop: 45	5	Res: 50	10	Drop Diameter: 5		Res Diameter: 10		Max Vol Drop: 30.0		Max Vol Res:	
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Drop: 25	5	5																																																																														
Res: 30	10	20																																																																														
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Drop: 35	5	5																																																																														
Res: 40	10	20																																																																														
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<b>9</b> <table border="1"> <thead> <tr> <th>x</th> <th>y</th> <th>z</th> </tr> </thead> <tbody> <tr> <td>Drop: 15</td> <td>15</td> <td>5</td> </tr> <tr> <td>Res: 20</td> <td>30</td> <td>20</td> </tr> <tr> <td colspan="3">Drop Diameter: 5</td> </tr> <tr> <td colspan="3">Res Diameter: 10</td> </tr> <tr> <td colspan="3">Max Vol Drop: 30.000 µl</td> </tr> <tr> <td colspan="3">Max Vol Res:</td> </tr> </tbody> </table>	x	y	z	Drop: 15	15	5	Res: 20	30	20	Drop Diameter: 5			Res Diameter: 10			Max Vol Drop: 30.000 µl			Max Vol Res:			<b>10</b> <table border="1"> <thead> <tr> <th>x</th> <th>y</th> <th>z</th> </tr> </thead> <tbody> <tr> <td>Drop: 25</td> <td>15</td> <td>5</td> </tr> <tr> <td>Res: 30</td> <td>20</td> <td>20</td> </tr> <tr> <td colspan="3">Drop Diameter: 5</td> </tr> <tr> <td colspan="3">Res Diameter: 10</td> </tr> <tr> <td colspan="3">Max Vol Drop: 30.000 µl</td> </tr> <tr> <td colspan="3">Max Vol Res:</td> </tr> </tbody> </table>	x	y	z	Drop: 25	15	5	Res: 30	20	20	Drop Diameter: 5			Res Diameter: 10			Max Vol Drop: 30.000 µl			Max Vol Res:			<b>11</b> <table border="1"> <thead> <tr> <th>x</th> <th>y</th> <th>z</th> </tr> </thead> <tbody> <tr> <td>Drop: 35</td> <td>15</td> <td>5</td> </tr> <tr> <td>Res: 40</td> <td>20</td> <td>20</td> </tr> <tr> <td colspan="3">Drop Diameter: 5</td> </tr> <tr> <td colspan="3">Res Diameter: 10</td> </tr> <tr> <td colspan="3">Max Vol Drop: 30.000 µl</td> </tr> <tr> <td colspan="3">Max Vol Res:</td> </tr> </tbody> </table>	x	y	z	Drop: 35	15	5	Res: 40	20	20	Drop Diameter: 5			Res Diameter: 10			Max Vol Drop: 30.000 µl			Max Vol Res:			<b>12</b> <table border="1"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr> <td>Drop: 45</td> <td>15</td> </tr> <tr> <td>Res: 50</td> <td>20</td> </tr> <tr> <td colspan="2">Drop Diameter: 5</td> </tr> <tr> <td colspan="2">Res Diameter: 10</td> </tr> <tr> <td colspan="2">Max Vol Drop: 30.0</td> </tr> <tr> <td colspan="2">Max Vol Res:</td> </tr> </tbody> </table>	x	y	Drop: 45	15	Res: 50	20	Drop Diameter: 5		Res Diameter: 10		Max Vol Drop: 30.0		Max Vol Res:	
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OK Cancel Help...

14300

14302

14304

Fig. 143



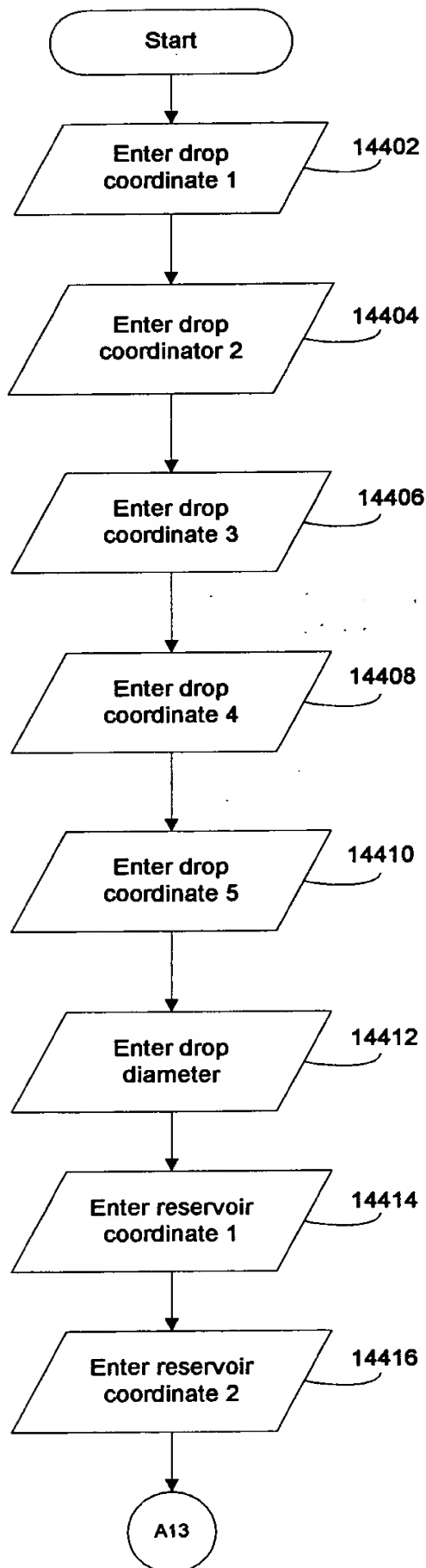


FIGURE 144

09631185.030200

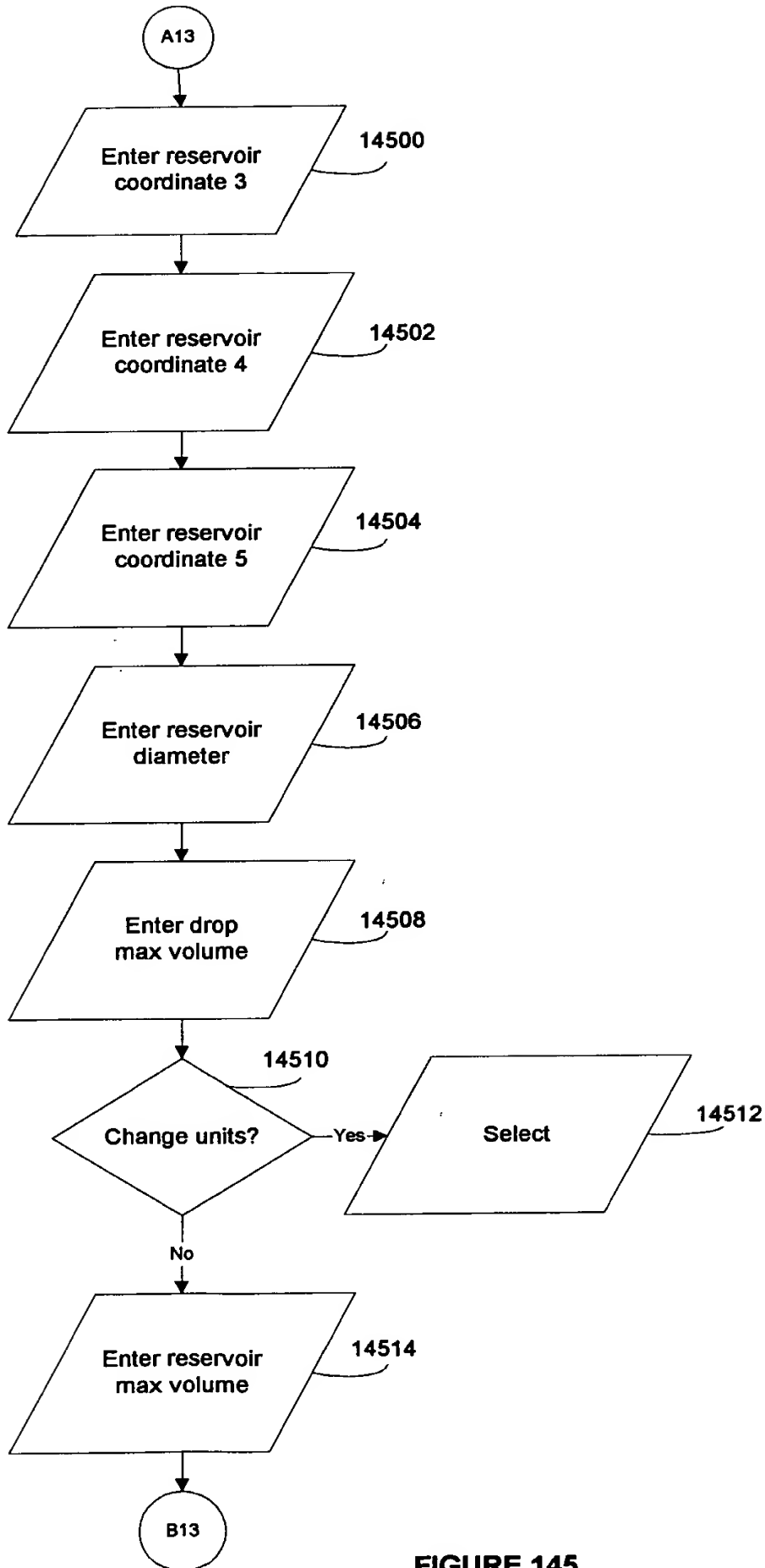


FIGURE 145

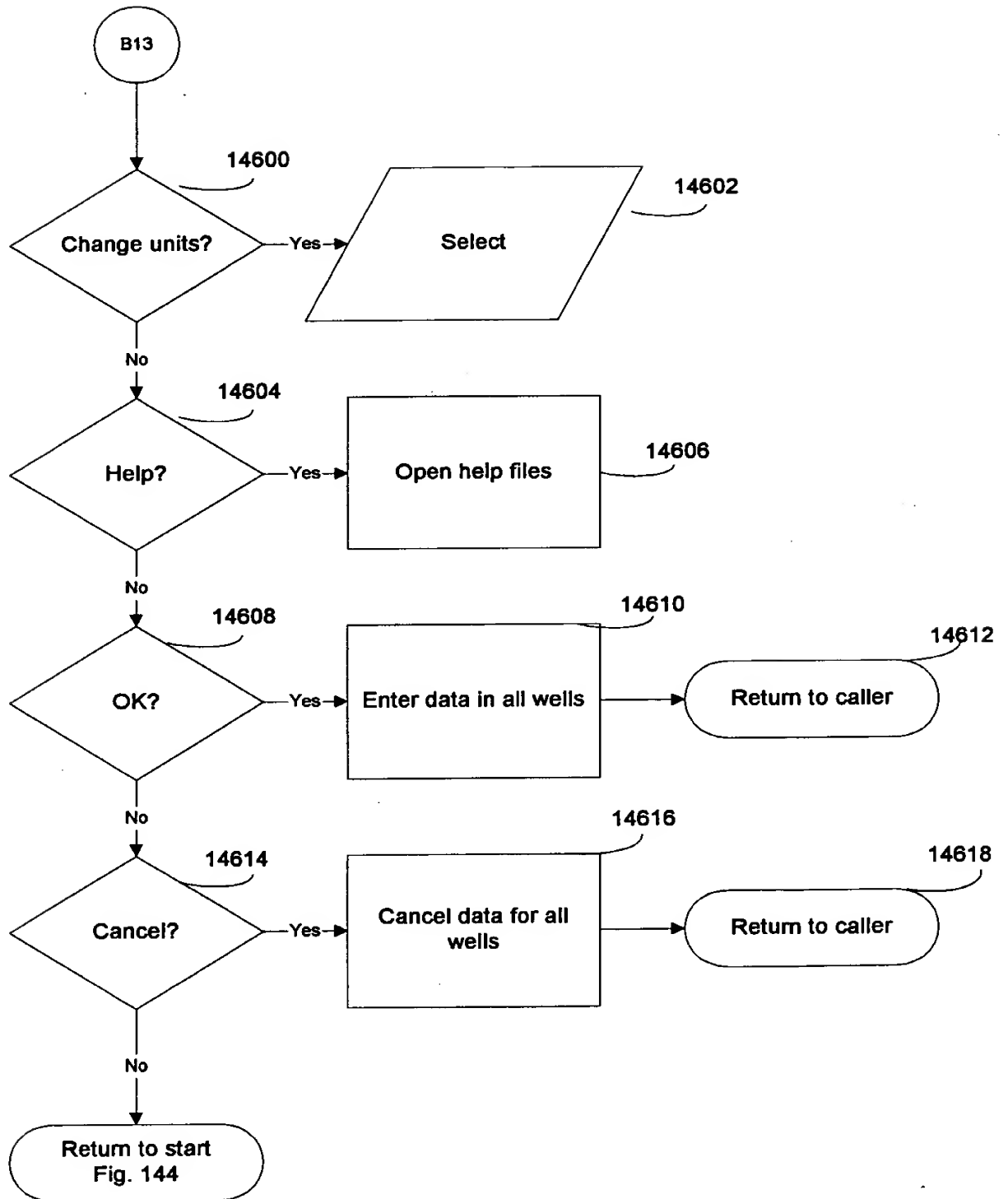


FIGURE 146

00631185-030200

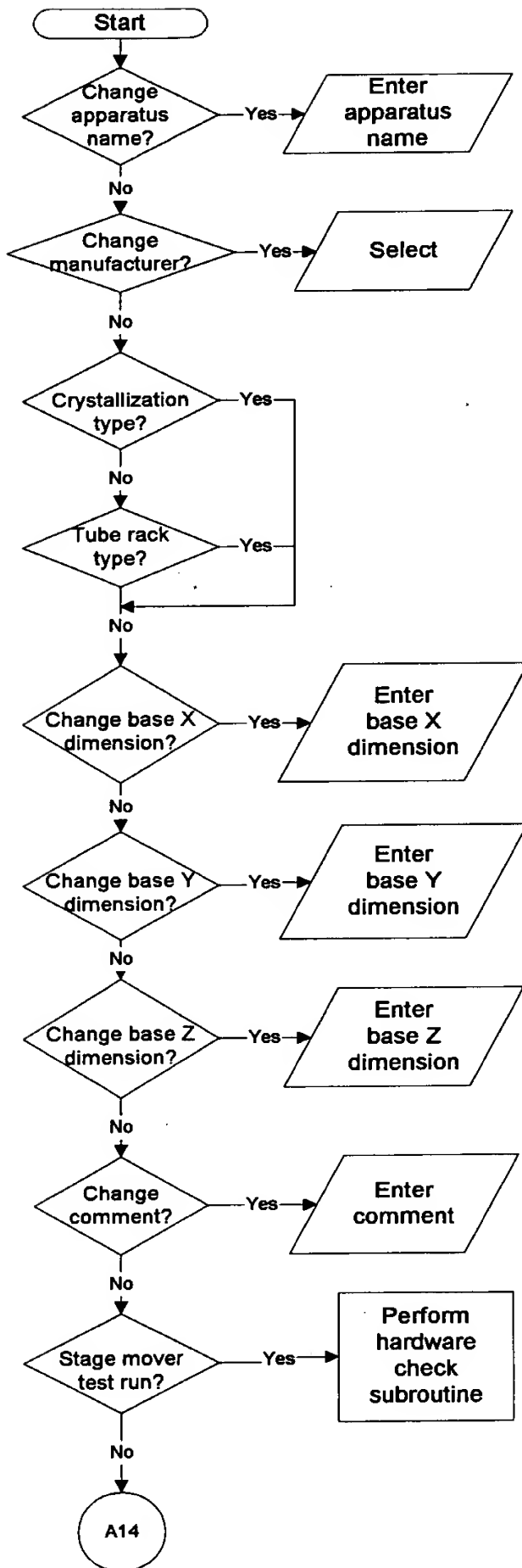


FIGURE 147

002020 "SATELLITE" 096311ES 080200

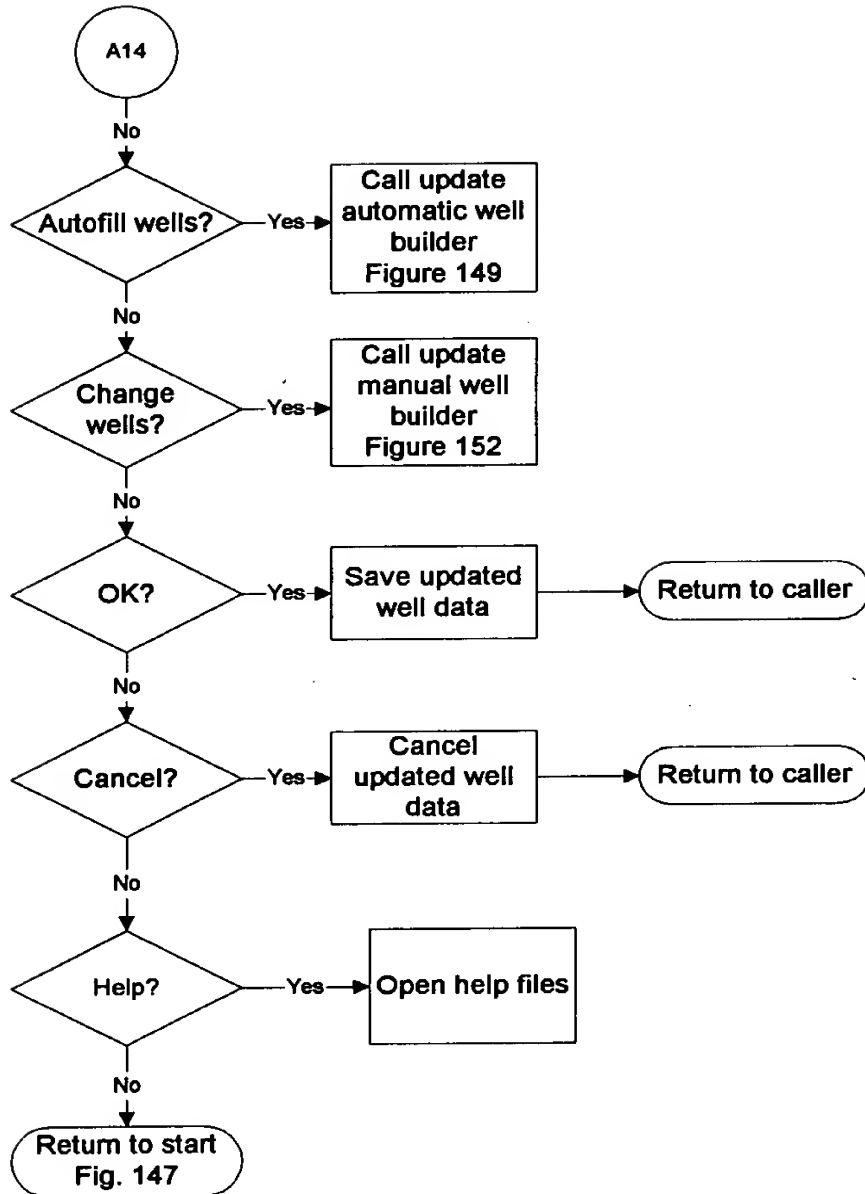


FIGURE 148

002080" SETTE960

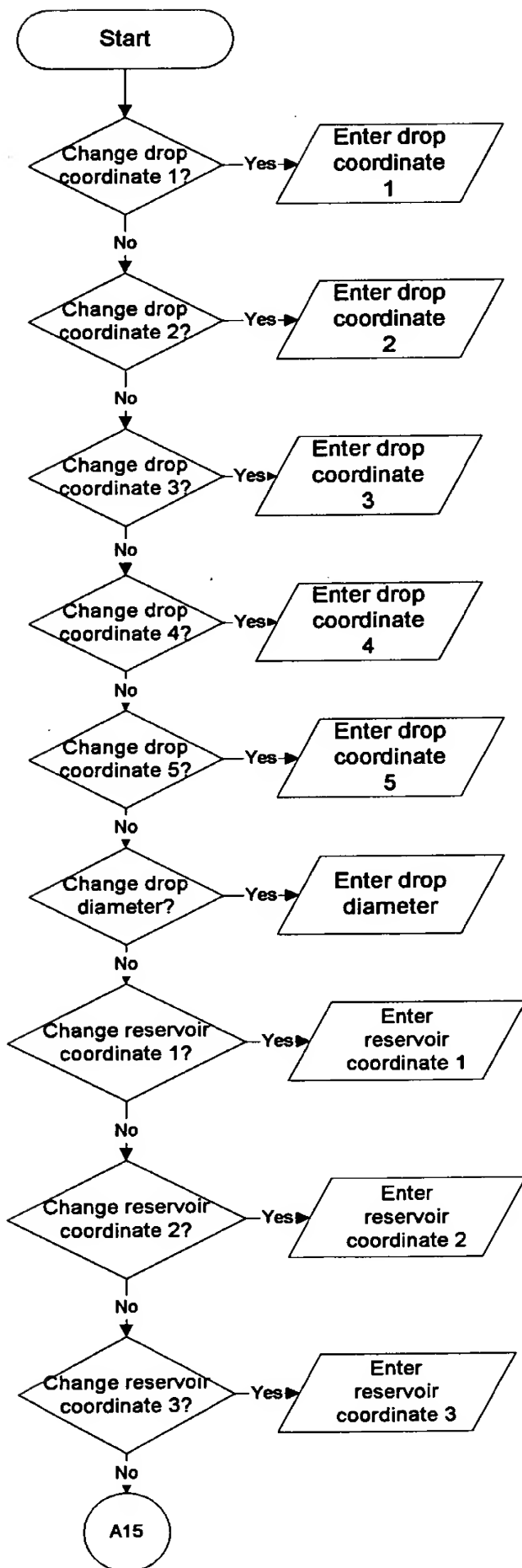


FIGURE 149

002080" 58T E 50

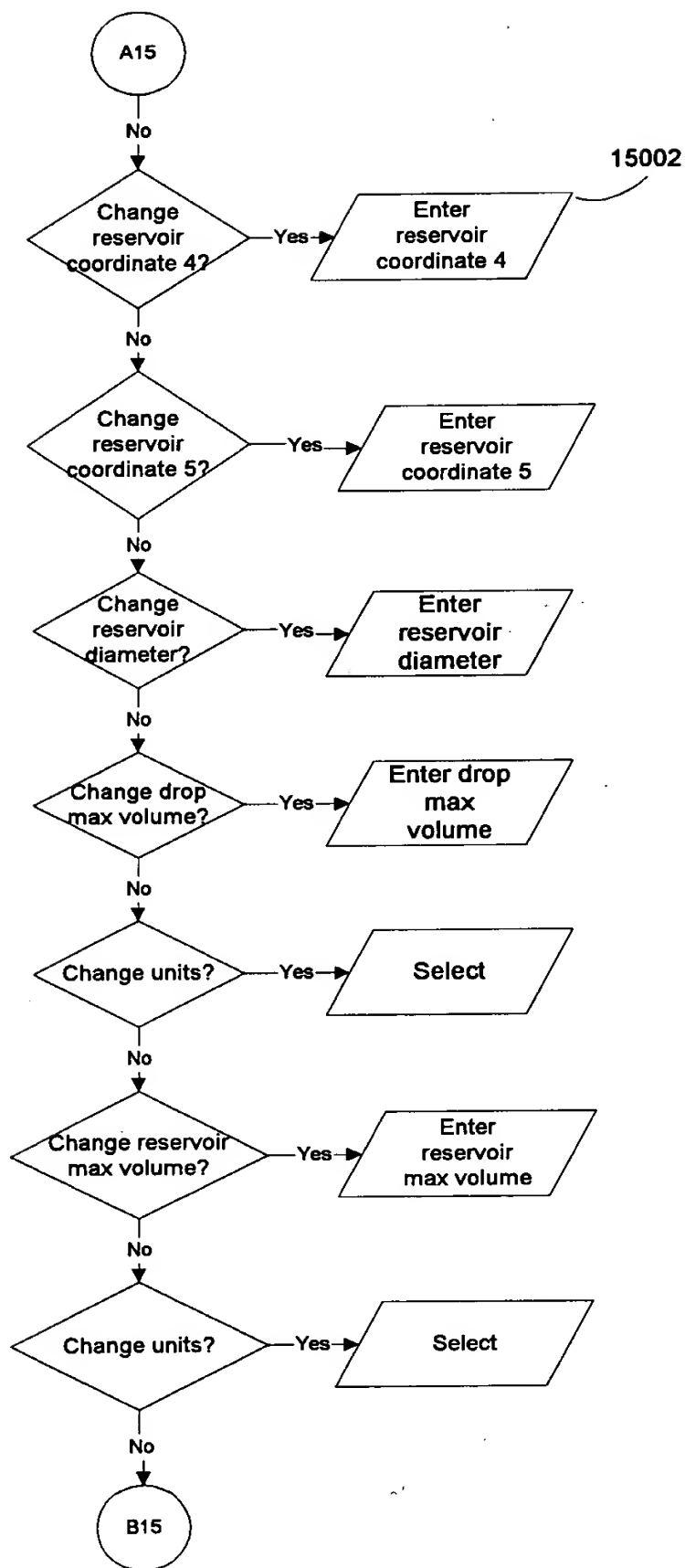


FIGURE 150

002030.587E950

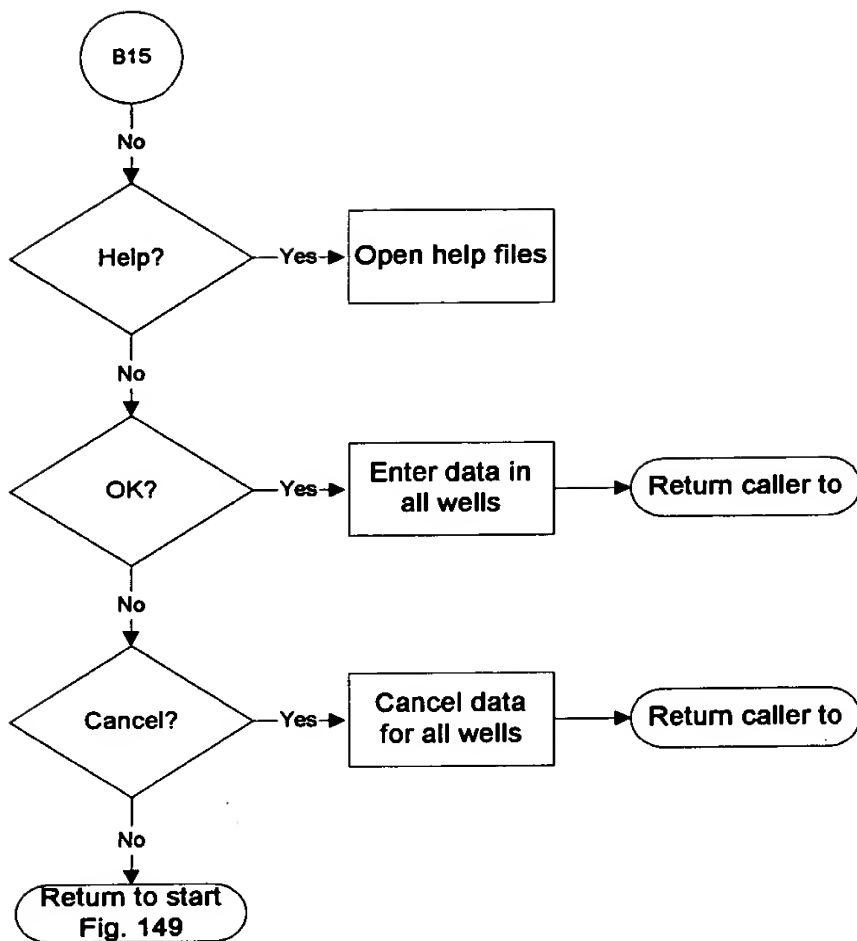


FIGURE 151



002030" SETTE960

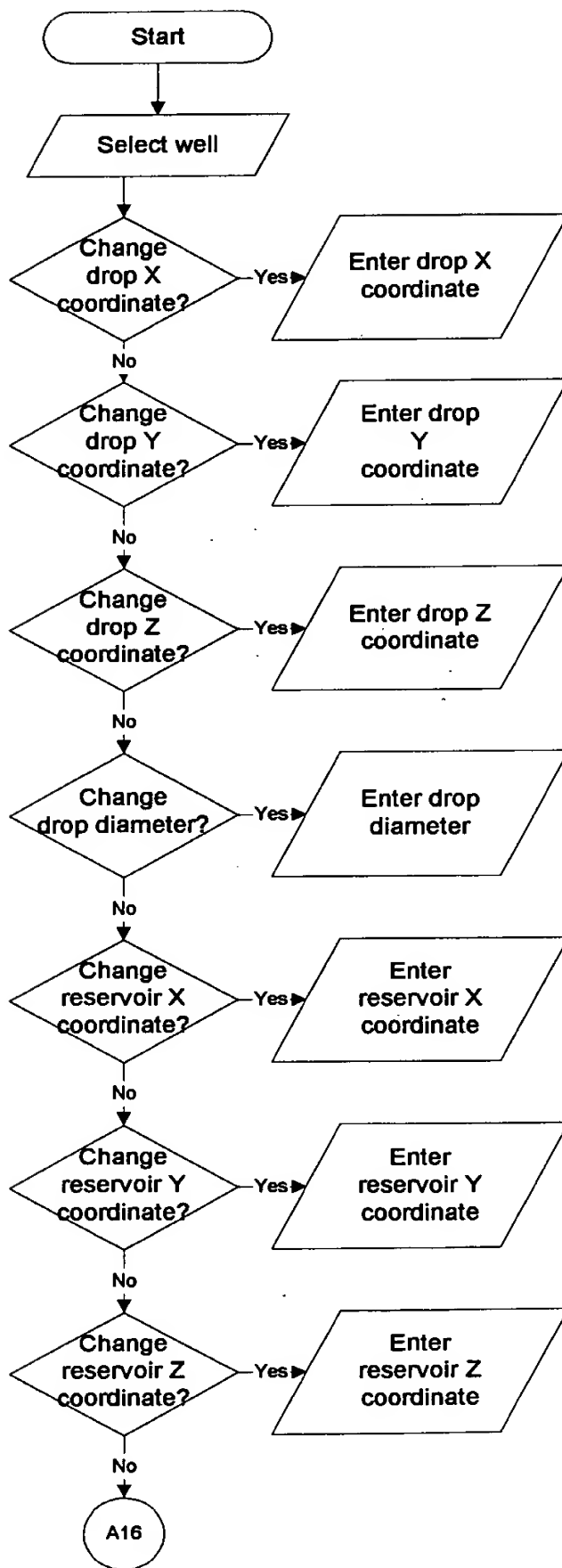


FIGURE 152

002080"59TTE960

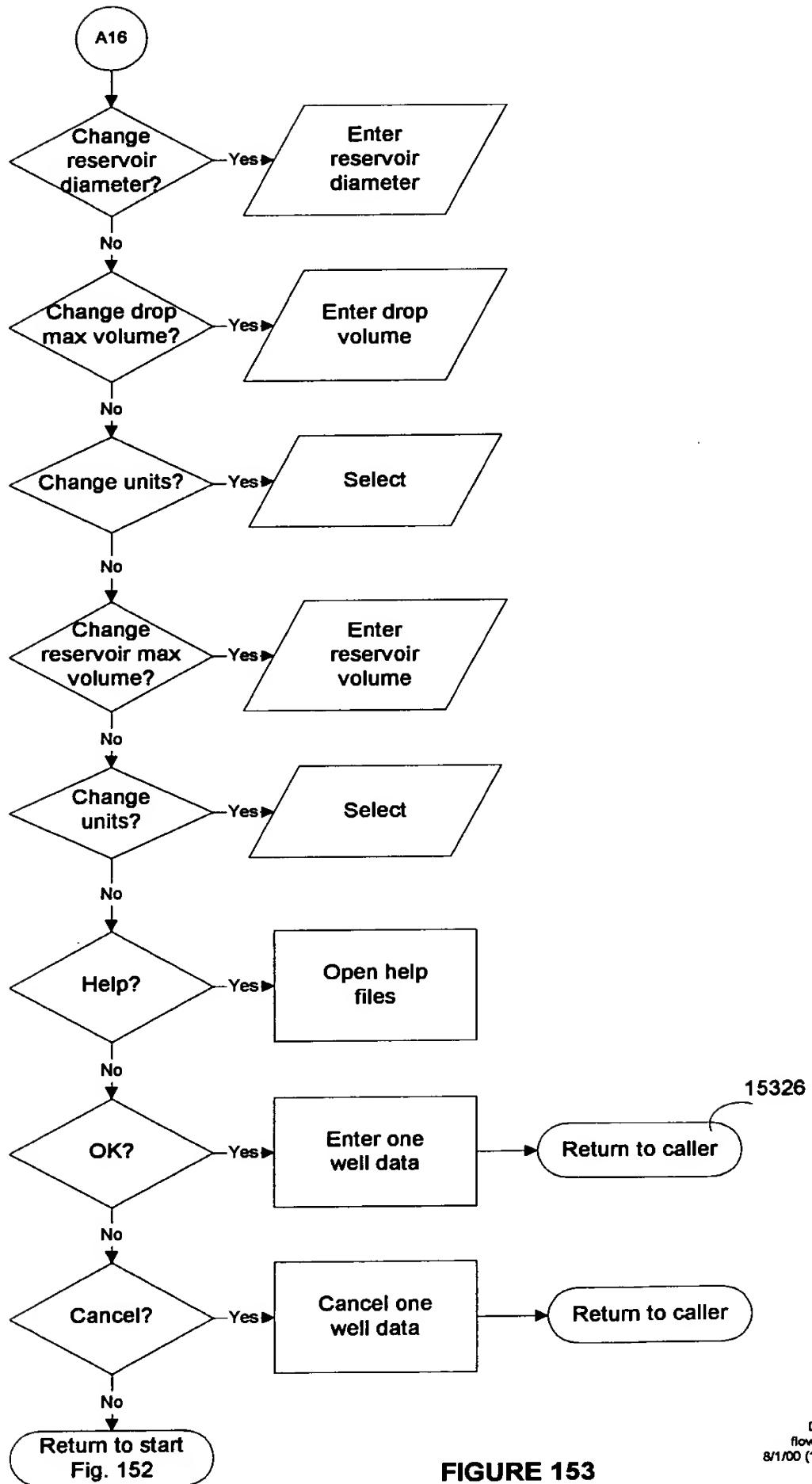
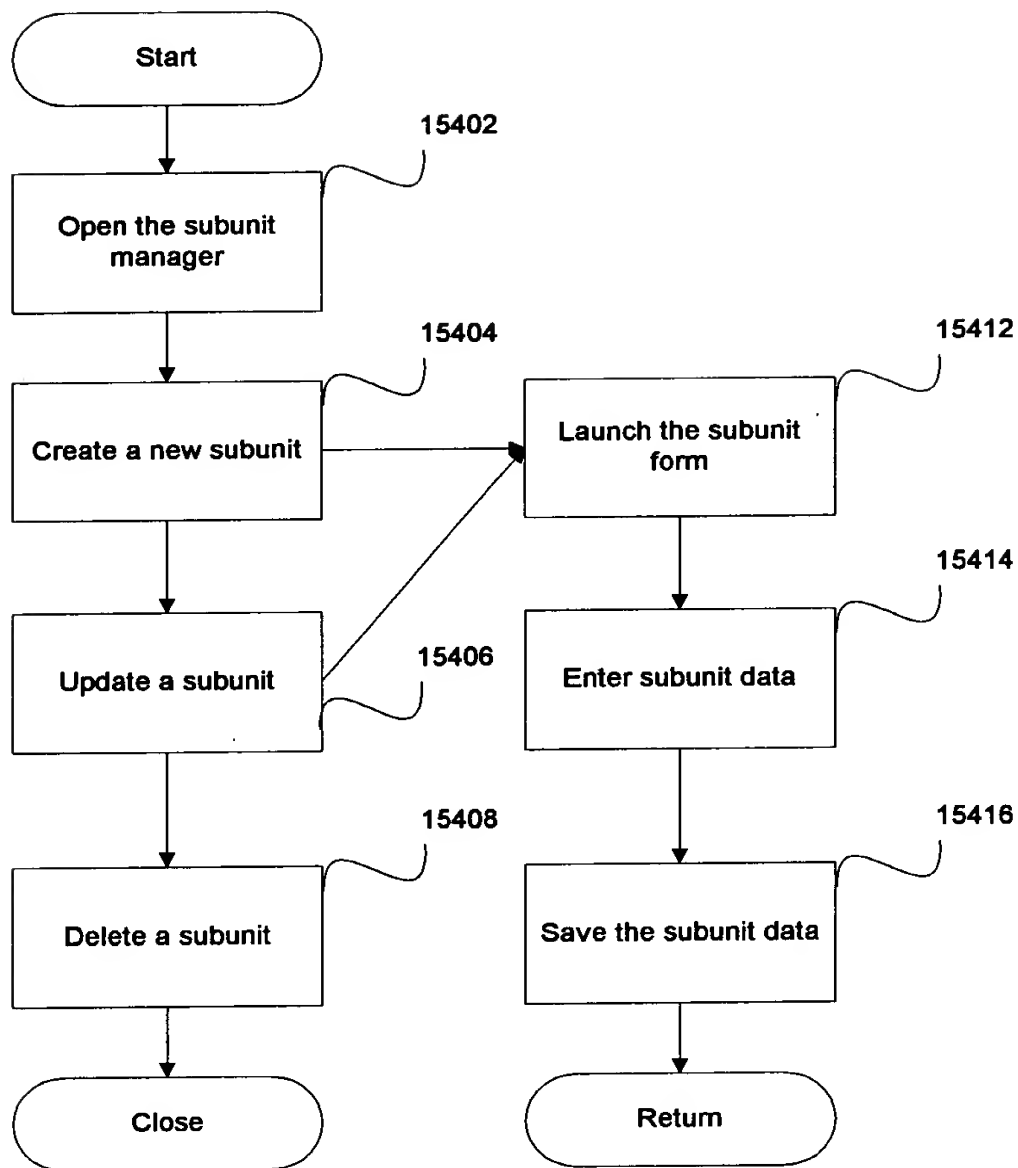


FIGURE 153

002000" 58T E960



**FIGURE 154**

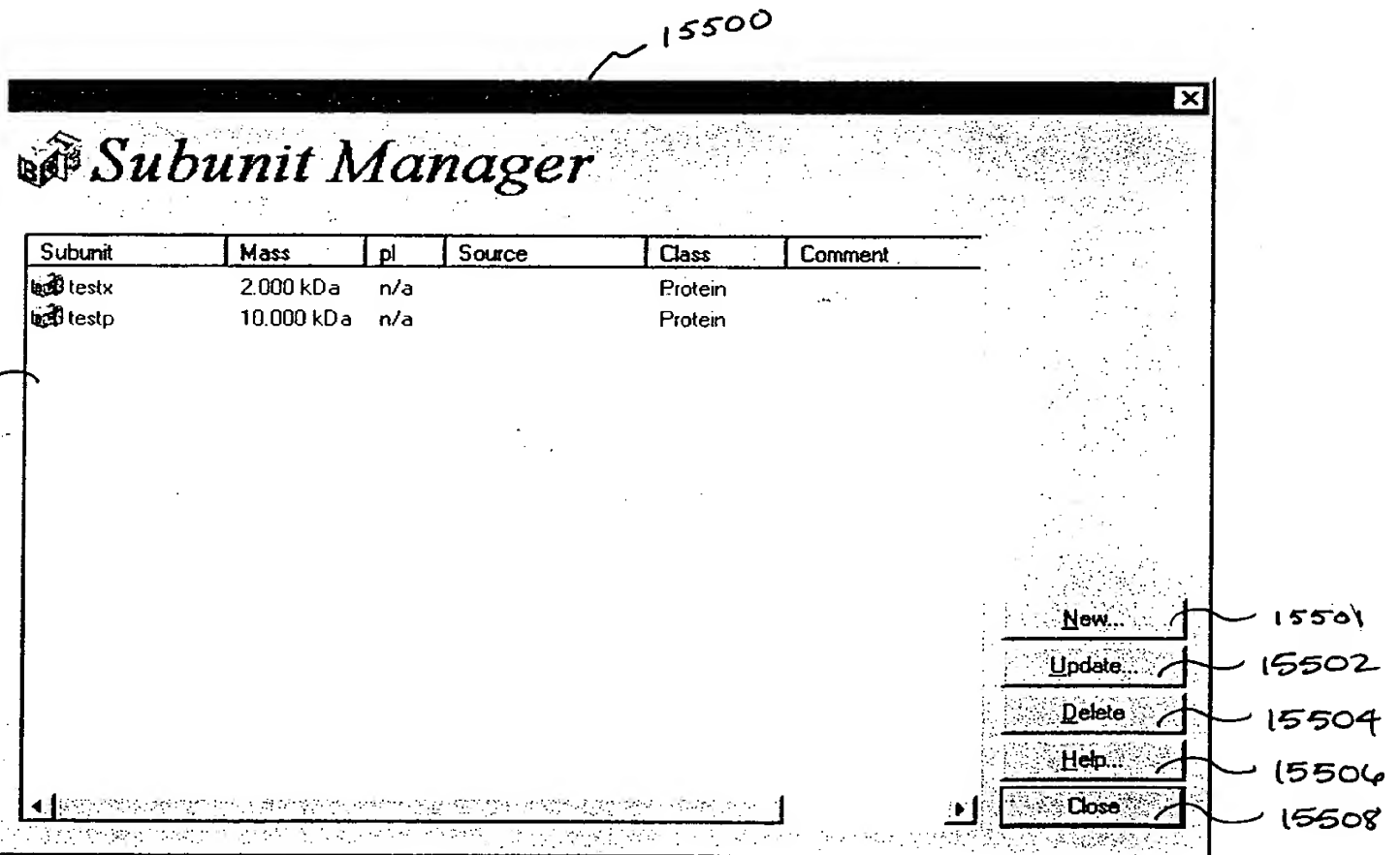
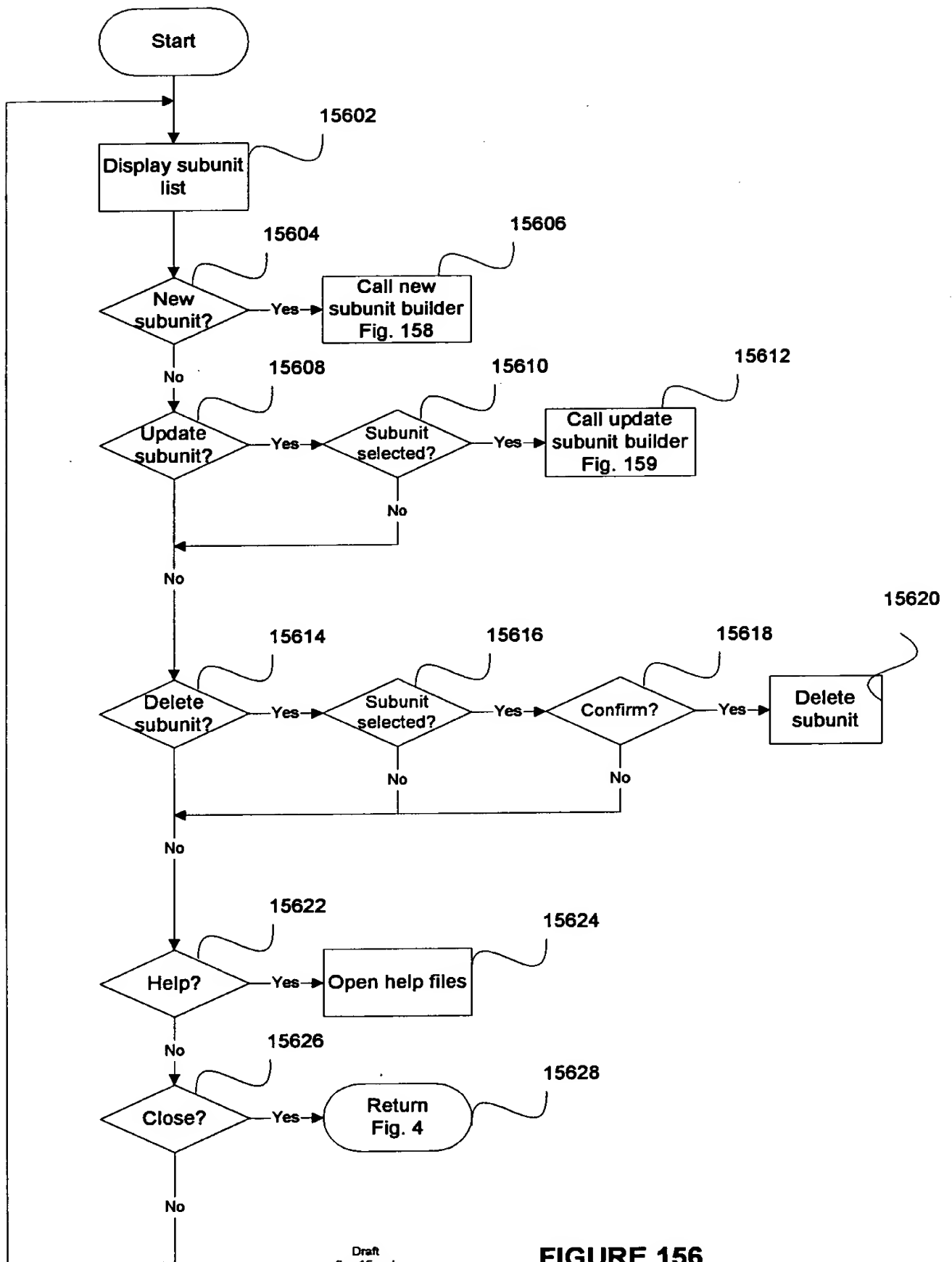


Fig. 155



002080" 55112960

15700

New Subunit

Attributes

Name: TbGAPDH 15701

Source: Trypanosoma brucei 15702

Class Name: Protein 15706

Mass: 40 kDa 15710

pI: 15712

Comment: 15714

Trypanosoma brucei  
glyceraldehyde-3-phosphate  
dehydrogenase 15716

OK 15718 Cancel 15720

15704

15708

Fig. 157

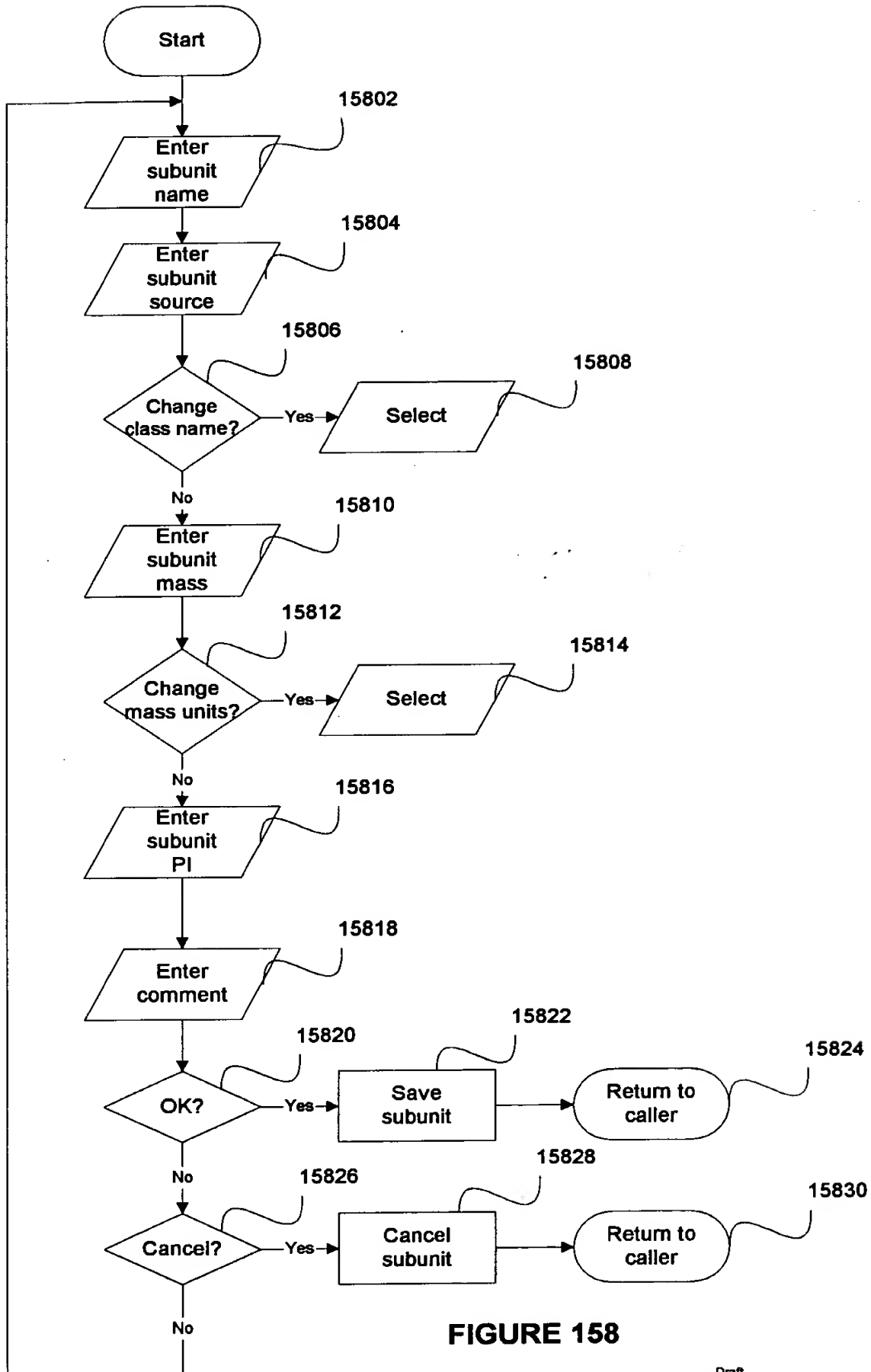


FIGURE 158

```

graph TD
    Start([Return]) --> D1{Change subunit name?}
    D1 -- Yes --> P1[/Enter new subunit name/]
    P1 --> D1
    D1 -- No --> D2{Change subunit source?}
    D2 -- Yes --> P2[/Enter new subunit source/]
    P2 --> D2
    D2 -- No --> D3{Change subunit class name?}
    D3 -- Yes --> P3[/Select new subunit class/]
    P3 --> D3
    D3 -- No --> D4{Change mass?}
    D4 -- Yes --> P4[/Enter new subunit mass/]
    P4 --> D4
    D4 -- No --> D5{Change mass units?}
    D5 -- Yes --> P5[/Select new units/]
    P5 --> D5
    D5 -- No --> D6{Change subunit PI?}
    D6 -- Yes --> P6[/Enter new subunit P1/]
    P6 --> D6
    D6 -- No --> D7{Change comment?}
    D7 -- Yes --> P7[/Enter new comment/]
    P7 --> D7
    D7 -- No --> D8{OK?}
    D8 -- Yes --> R1[Save updated subunit]
    R1 --> R1R([Return to caller])
    D8 -- No --> D9{Cancel?}
    D9 -- Yes --> R2[Cancel updated subunit]
    R2 --> R2R([Return to caller])
    D9 -- No --> D1
  
```

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002020" 59TTE960

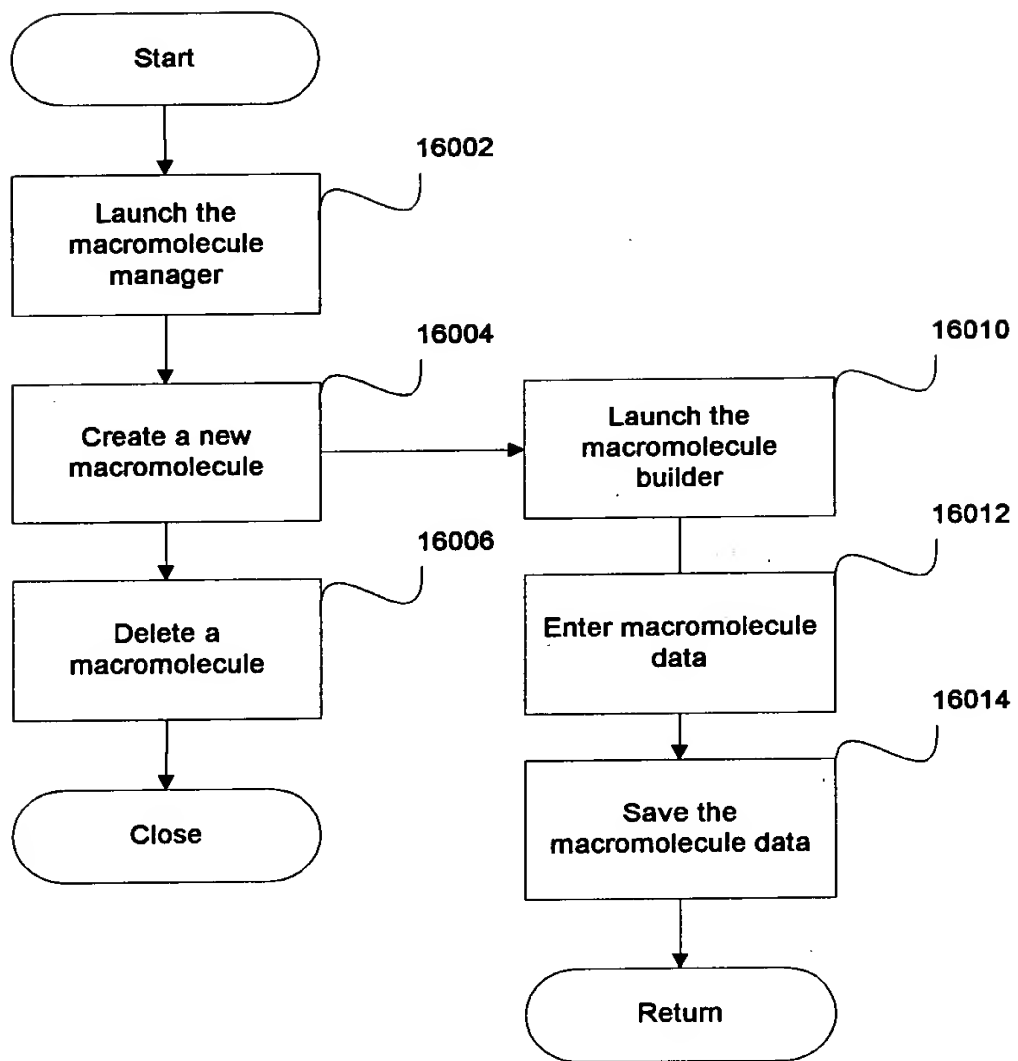


FIGURE 160

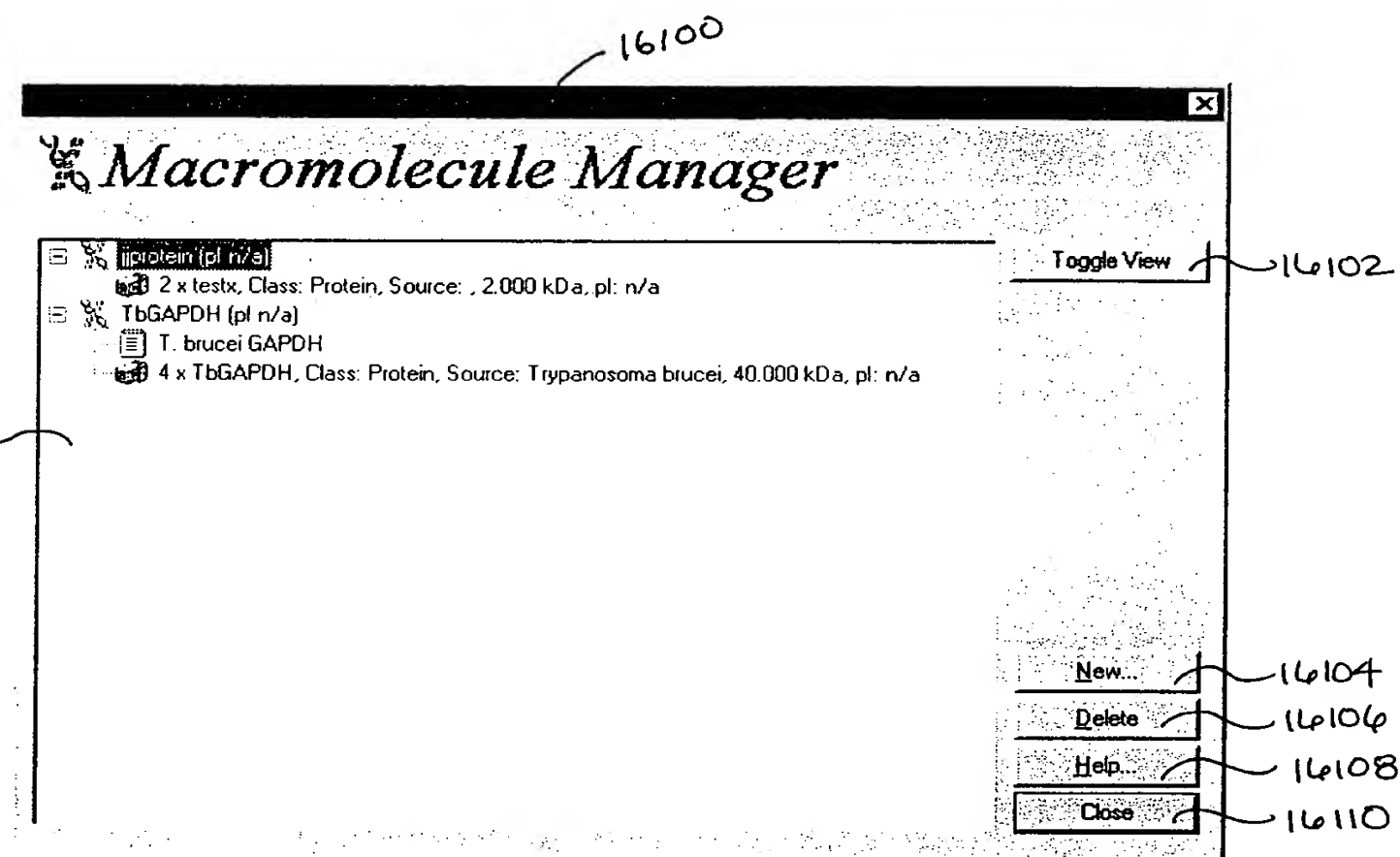


Fig. 161

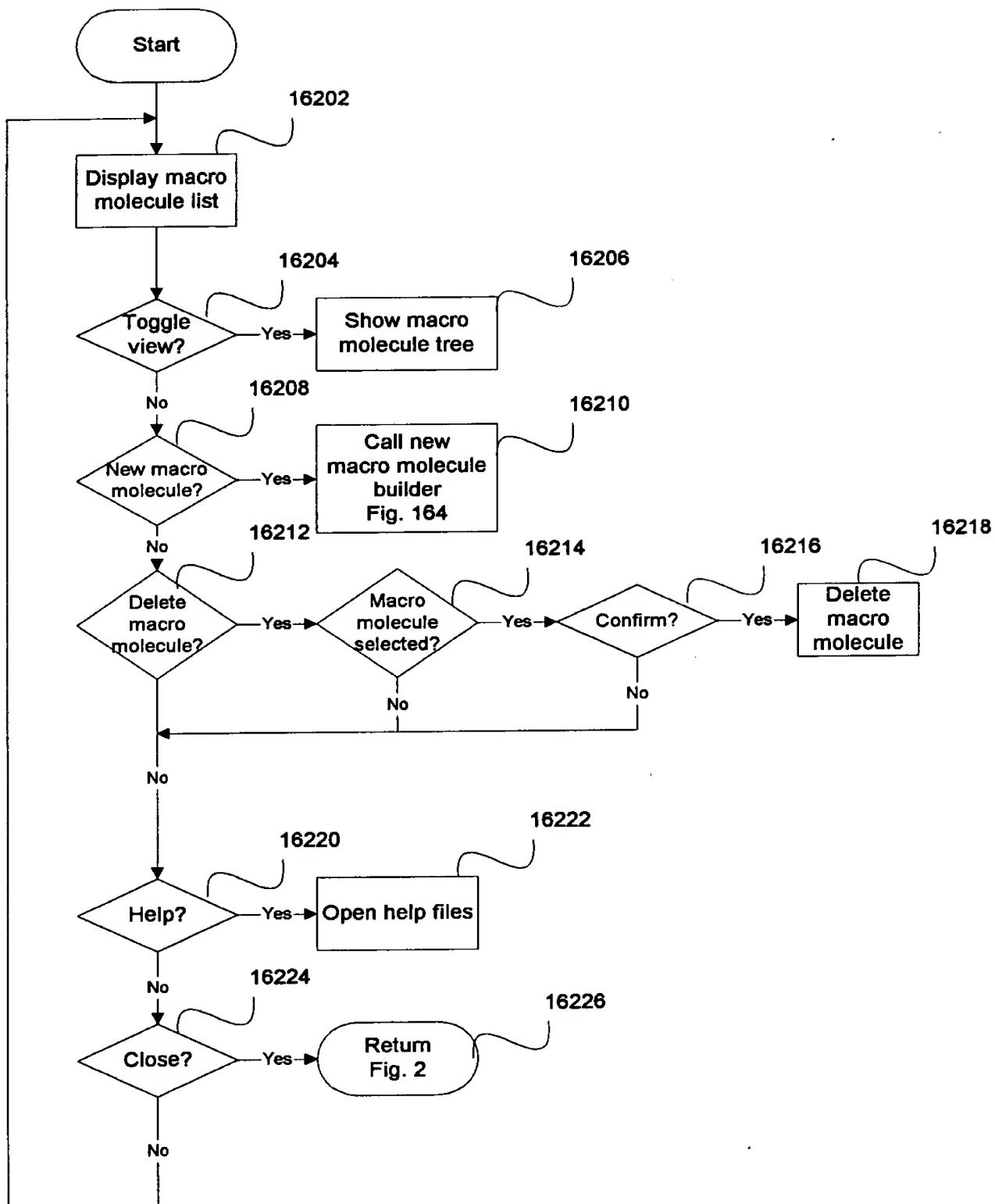


FIGURE 162

002080-597260

Macromolecule Builder

Subunits: Create Subunit...

Subunit	Mass	pI	Source
testx	2.000 kDa	n/a	
testp	10.000 kDa	n/a	
TbGAPDH	40.000 kDa	n/a	Trypan

Molecule Name: 4testx

pI:

Molecule Class: Protein

Comment:  
testx holo-tetramer

Subunits associated with new Molecule:

Count	Subunit	Mass	pI	Source
4	testx	2.000 k...	n/a	

Buttons: Save Cancel Help...

FIG. 163

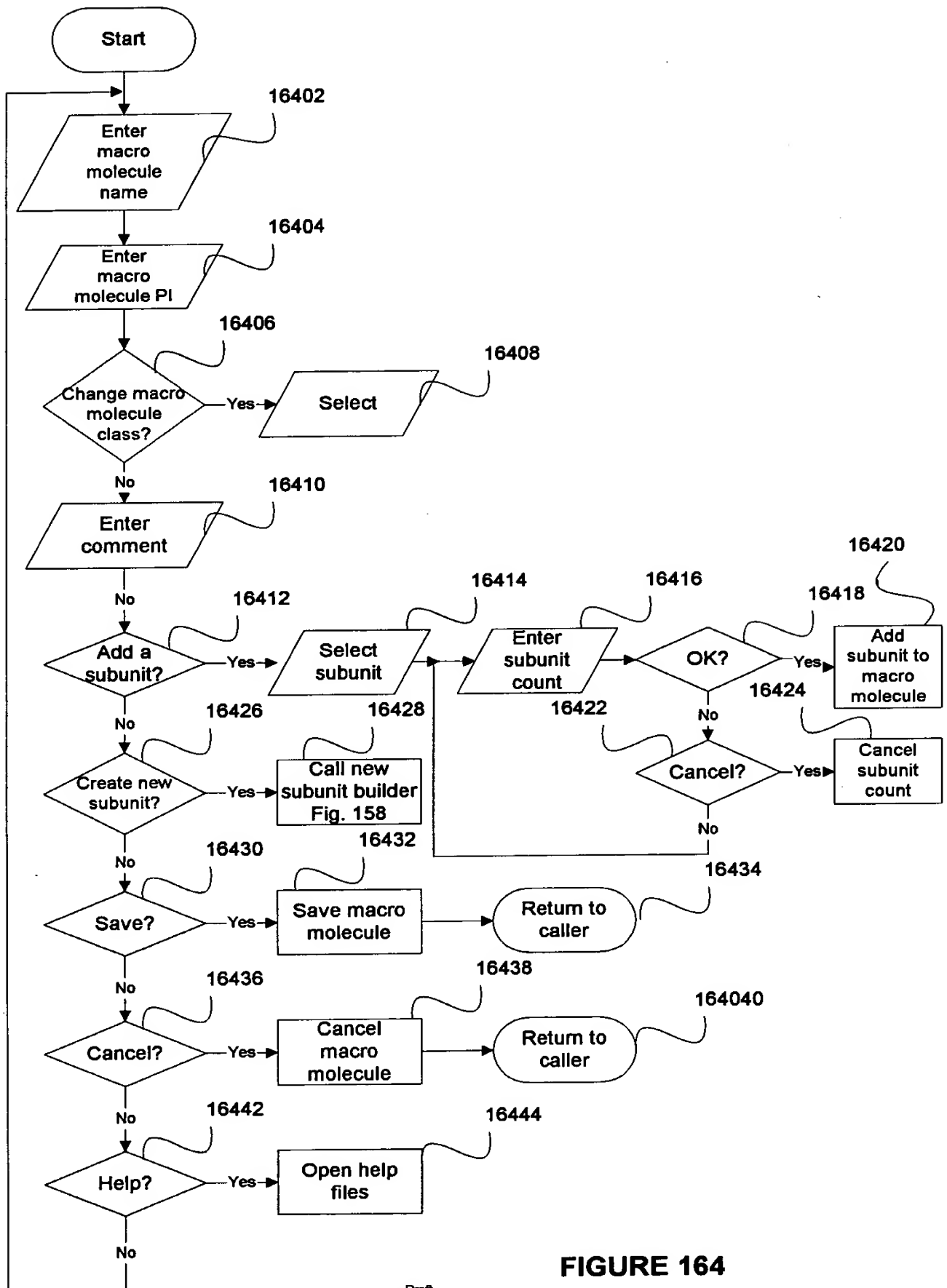


FIGURE 164

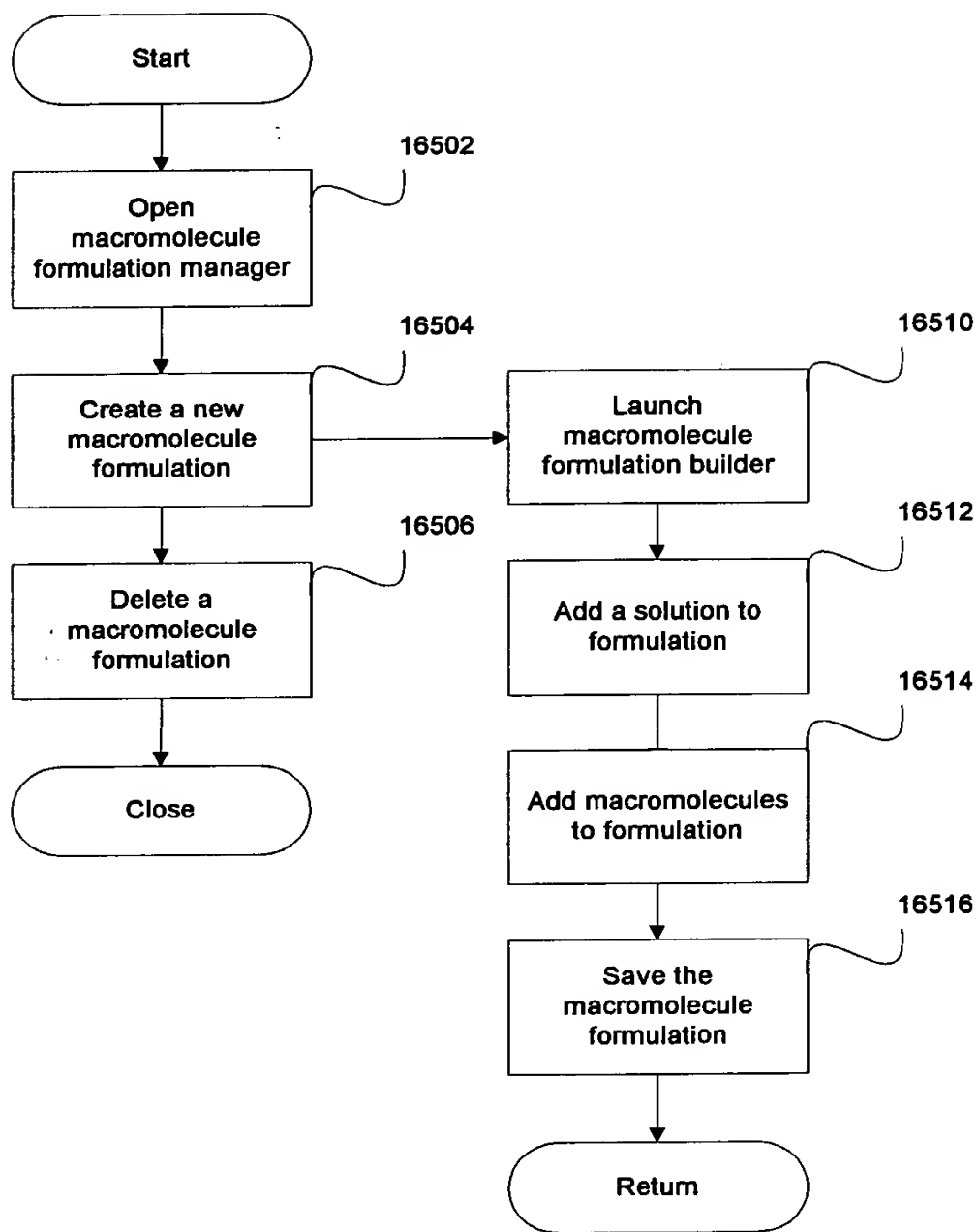


FIGURE 165

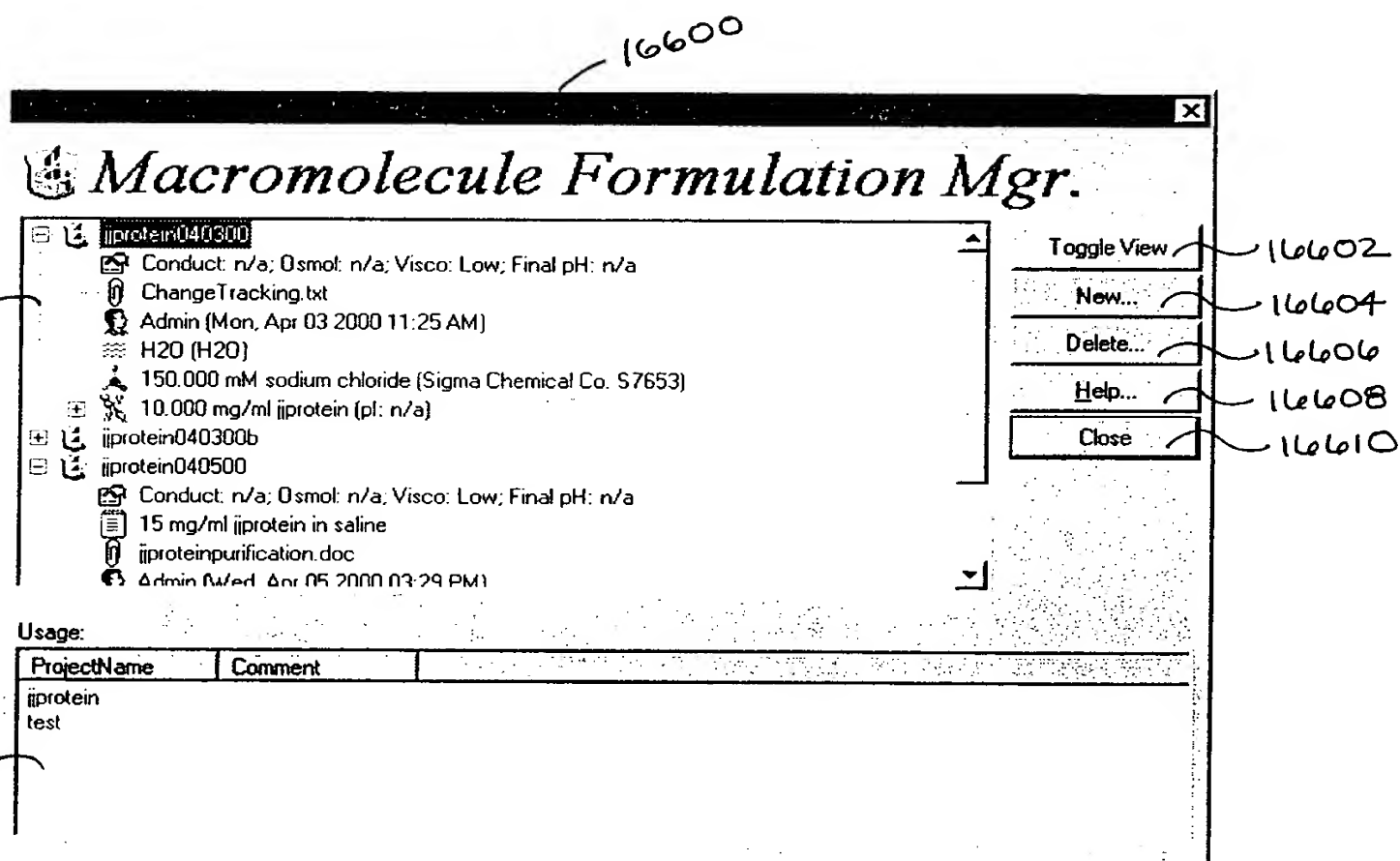


Fig. 166

Draft  
flow16a.vsd  
8/1/00 (1:46:11 PM)



16802      16808      16800

**Macromolecule Formulation Builder** [X]

Solutions | **Macromolecules**

New Macromolecule...

4testx (pl n/a)

4 x testx, Class: Protein, Source: , 2.000 kDa, pl: n/a

augx (pl n/a)

2 x augx, Class: Protein, Source: A. vinelandii, 34.000

ijprotein (pl n/a)

2 x testx, Class: Protein, Source: , 2.000 kDa, pl: n/a

TbGAPDH (pl n/a)

4 x TbGAPDH, Class: Protein, Source: Trypanosoma

**Molecule List**

15.000 mg/ml 4testx

**Solution:** saline

**Prep. Date:** 4/ 7/00

**Storage Temp:** 4 C

**Preparator:** Admin

**Macromolecule Formulation Name:**

ijprotein040700

E:\crymon\Help\crystalmonitor\images\ijprot

**Comment:**

15 mg/ml ijprotein in saline

[Save] [X] [?] [ ]

Fig. 168

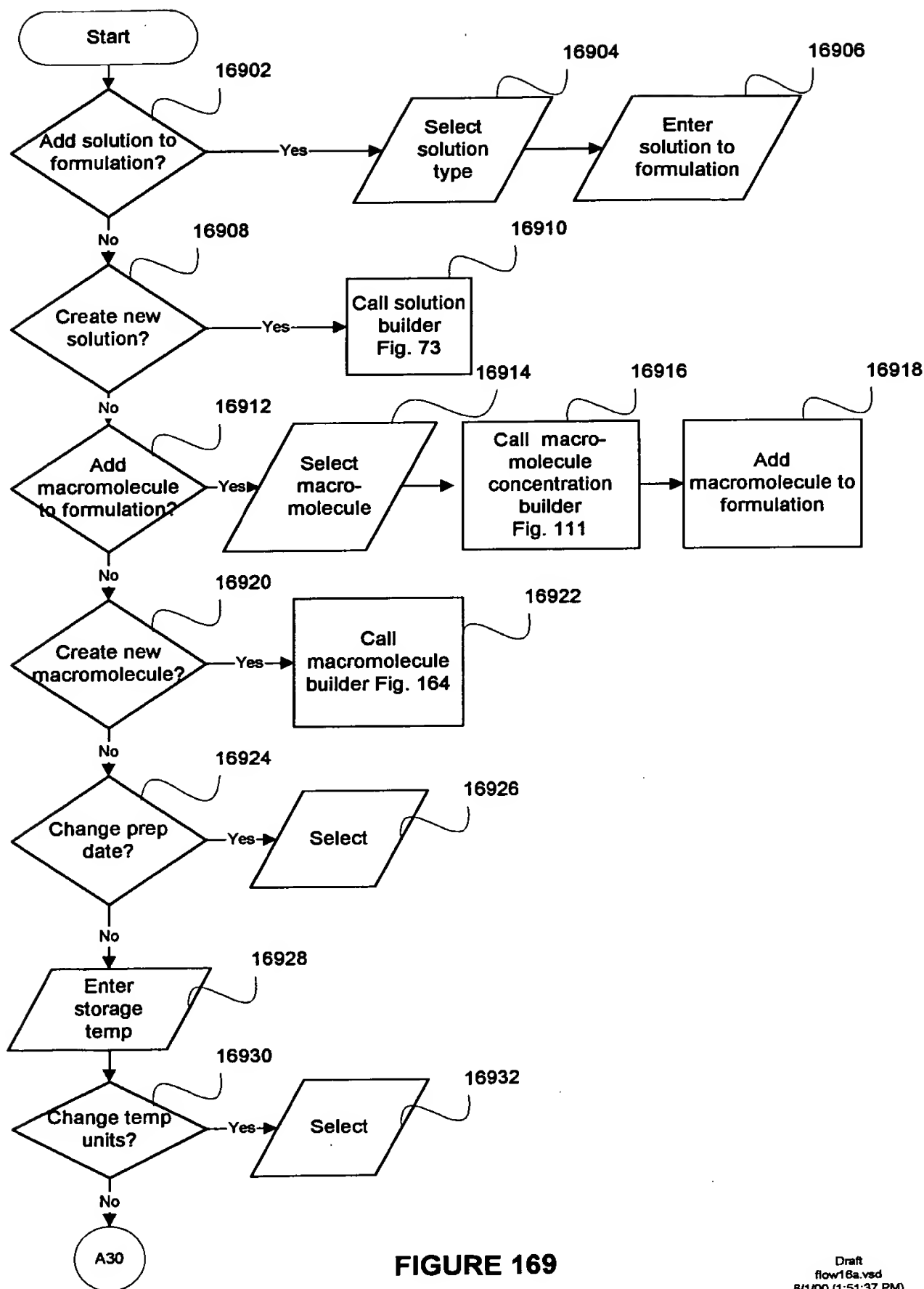


FIGURE 169

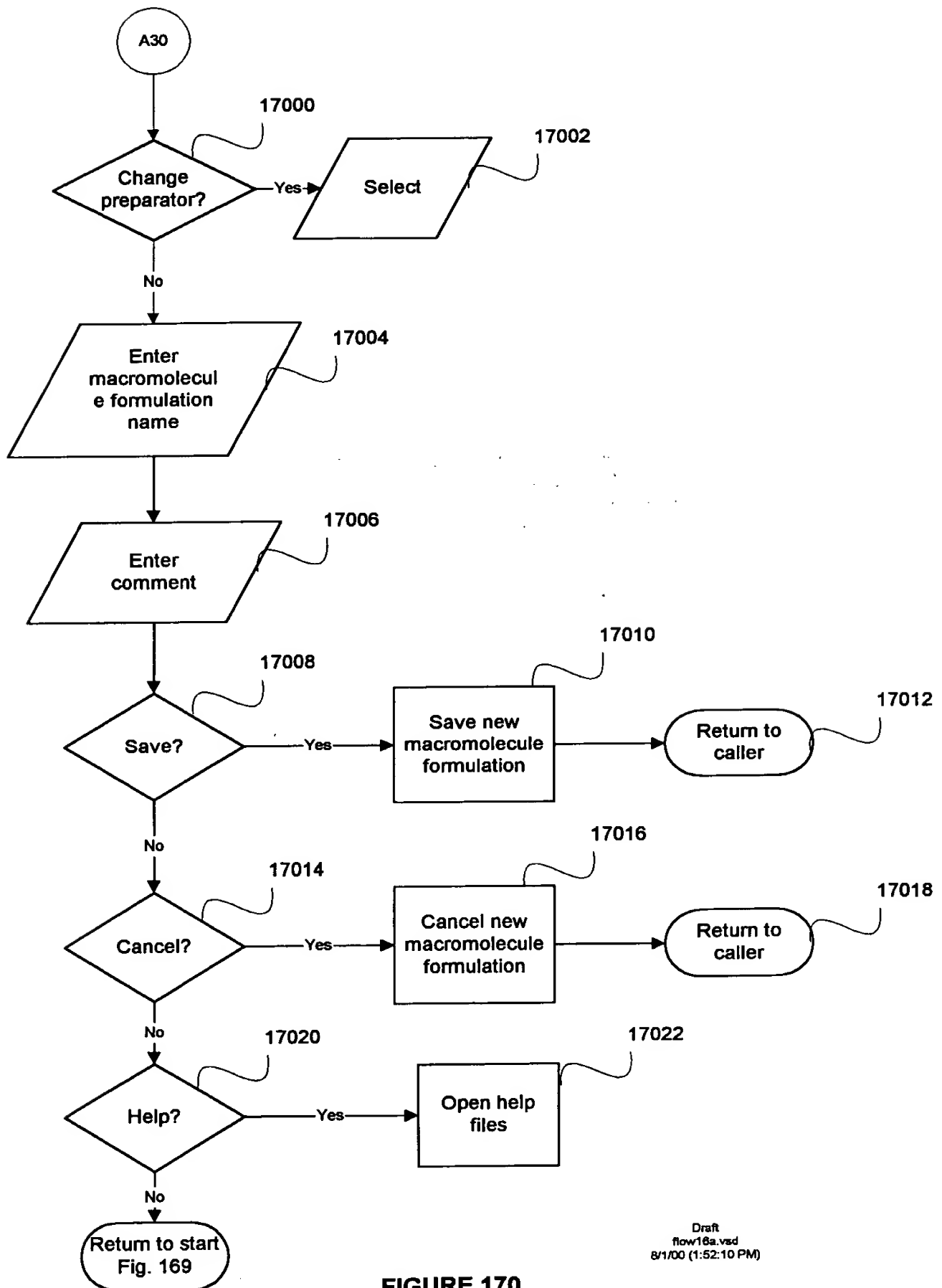
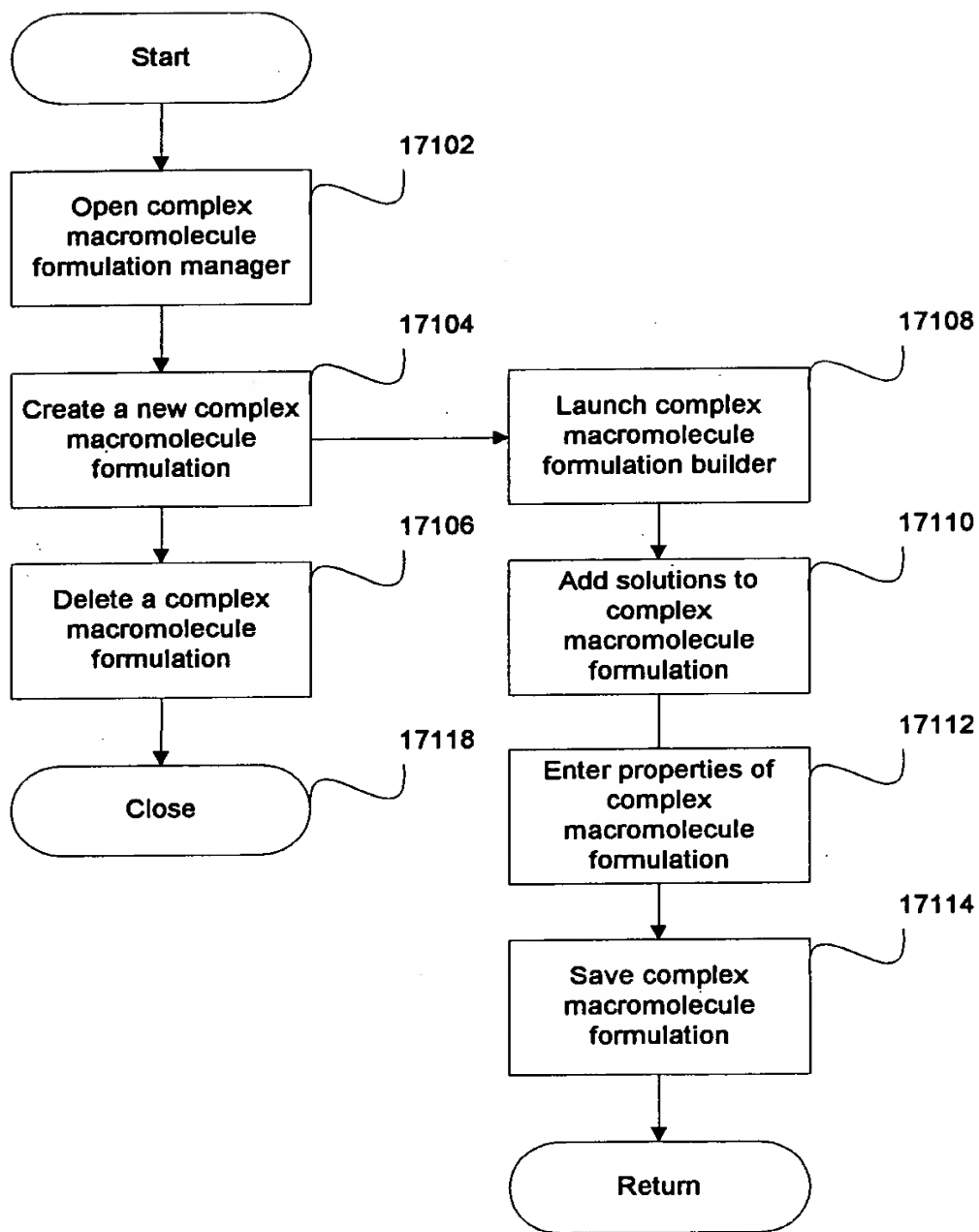


FIGURE 170



**FIGURE 171**



17200

002030" 511E950 17201

### Complex Macromolecule Form. Mgr.

17202

Toggle View

17206

New...

17208

Delete...

17210

Help...

17212

Close

Usage:

ProjectName	Comment
ijprotein	

7204

FIG. 172

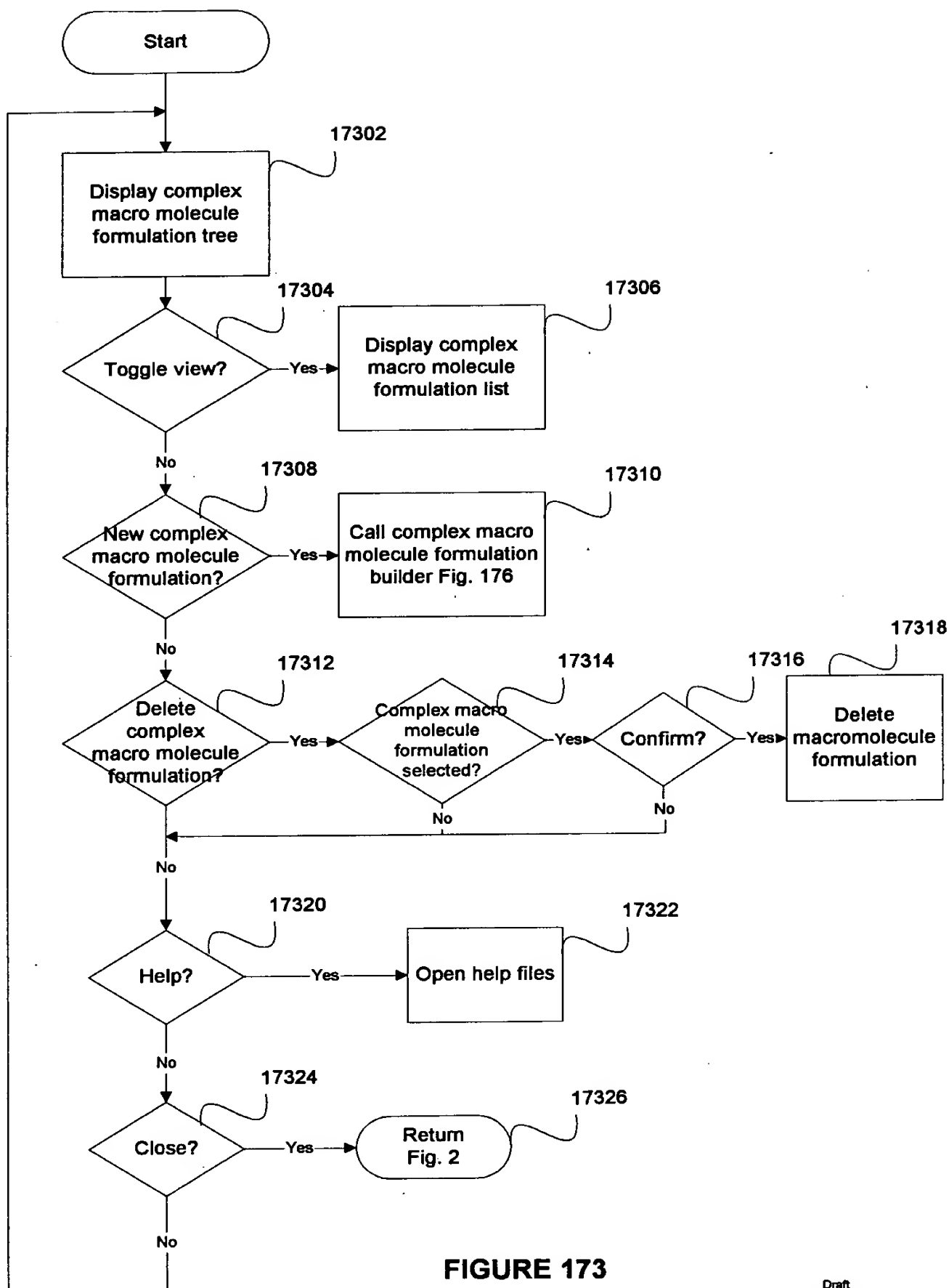


FIGURE 173

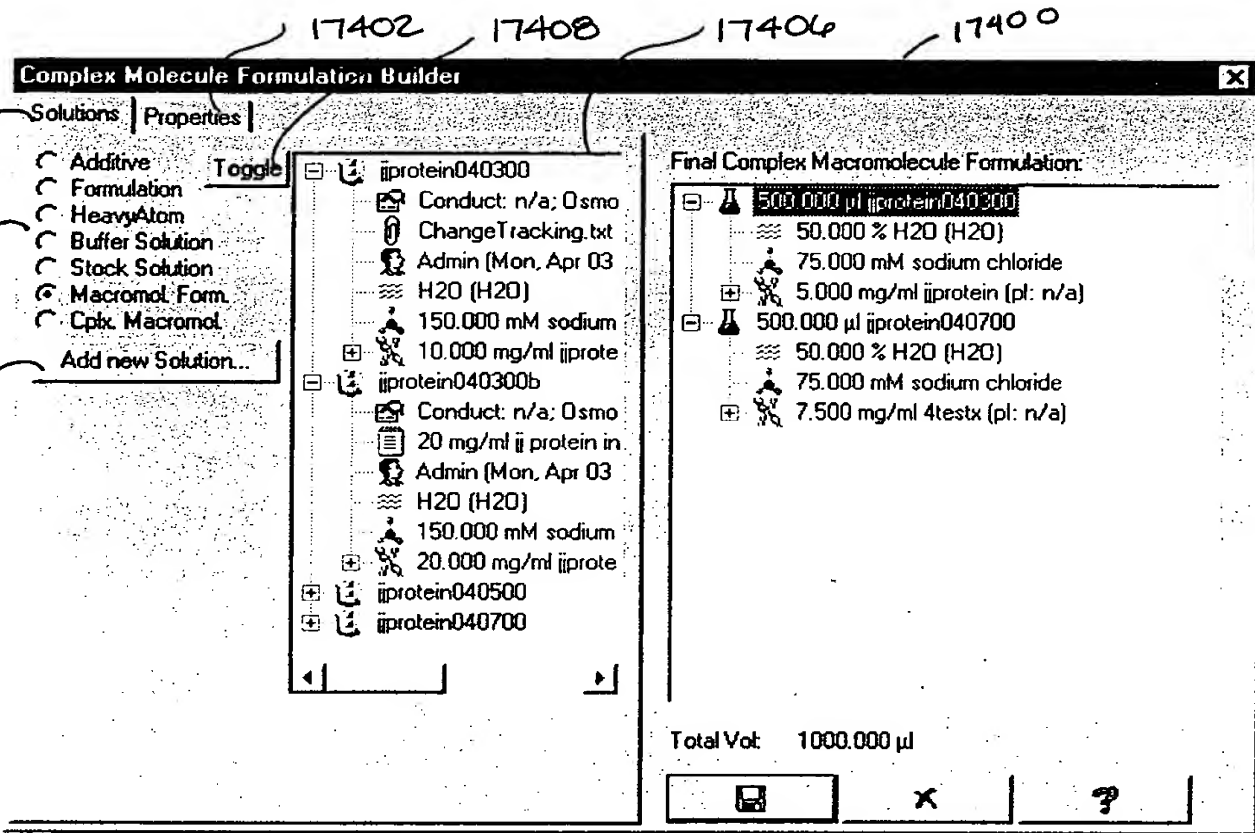


Fig. 174

17500 17530 17528 17508 17510 17512

### Complex Molecule Formulation Builder

Solutions Properties

17501 Timestamp: 4/ 7/00

7502 Storage Temp: 4

7504 Preparator: Admin

17506 Final pH:

17506 Conductivity:  $\mu\text{S}/\text{cm}$

17520 Vapor Pressure Osmolality: mmole/kg

17522 Solvent: H2O (Mothe)

17524 New Solution Name: iiproteincomplex37

17526 Viscosity: ☒ Low ☐ High

17538 Comment: mix iiprotein040300 and iiprotein040700

17536

#### Final Complex Macromolecule Formulation:

- 500.000  $\mu\text{l}$  iiprotein040300
- 50.000 % H2O (H2O)
- 75.000 mM sodium chloride
- 5.000 mg/ml iiprotein (pl: n/a)
- 500.000  $\mu\text{l}$  iiprotein040700
- 50.000 % H2O (H2O)
- 75.000 mM sodium chloride
- 7.500 mg/ml 4testx (pl: n/a)

17514

17516

17518

17534

Total Vol: 1000.000  $\mu\text{l}$

17540 17542 17544

Fig. 175



002080" 53TTE960

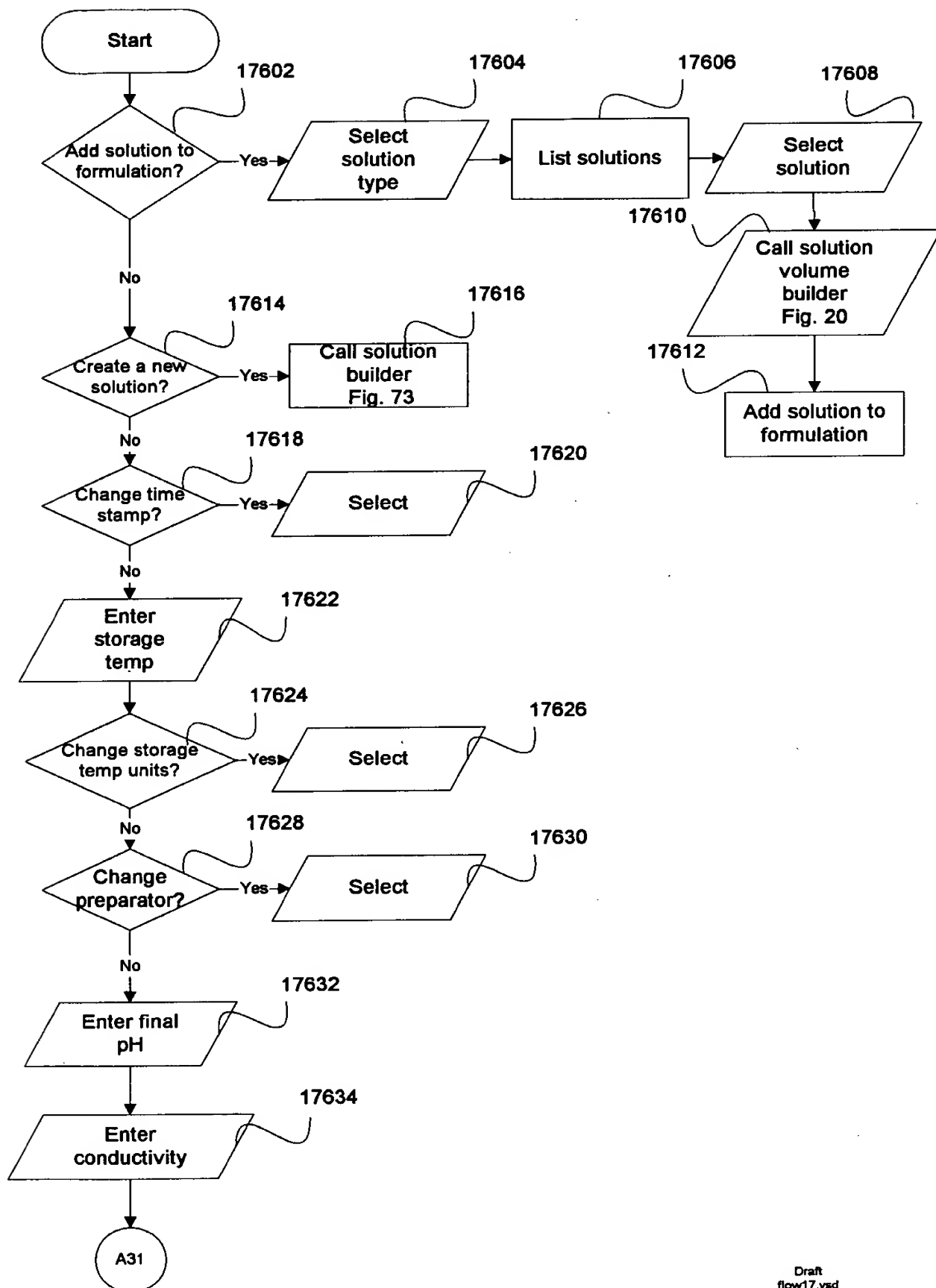


FIGURE 176

000000"55T7E960

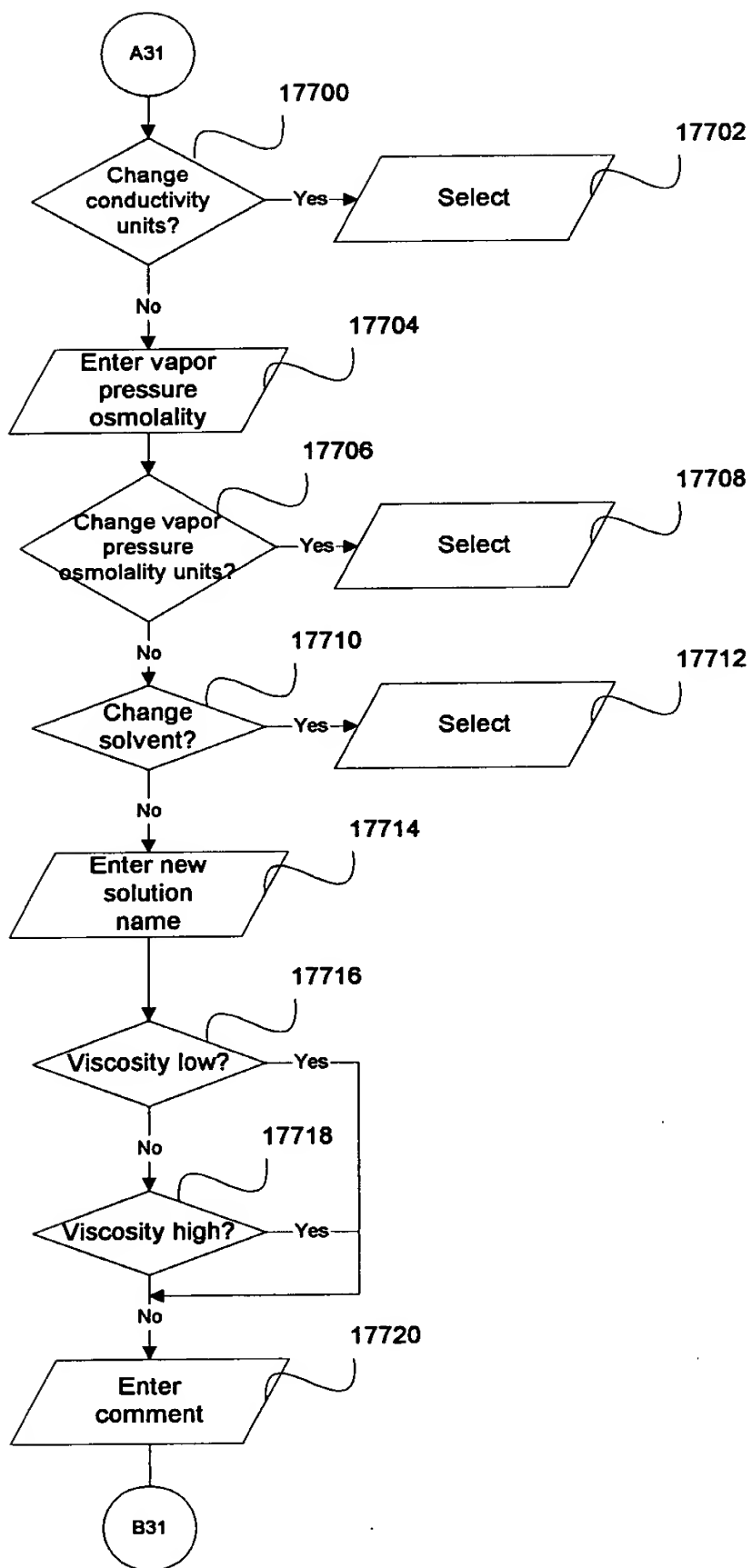


FIGURE 177

```

graph TD
    B31((B31)) --> Save{Save?}
    Save -- Yes --> 17802[Save new complex macro molecule formulation]
    17802 --> 17804([Return to caller])
    Save -- No --> Cancel{Cancel?}
    Cancel -- Yes --> 17806[Cancel new complex macro molecule formulation]
    17806 --> 17810([Return to caller])
    Cancel -- No --> Help{Help?}
    Help -- Yes --> 17812[Open help files]
    Help -- No --> 17814([Return to start Fig. 176])
  
```

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flow17.vsd  
8/1/00 (2:41:28 PM)

09631165-080200

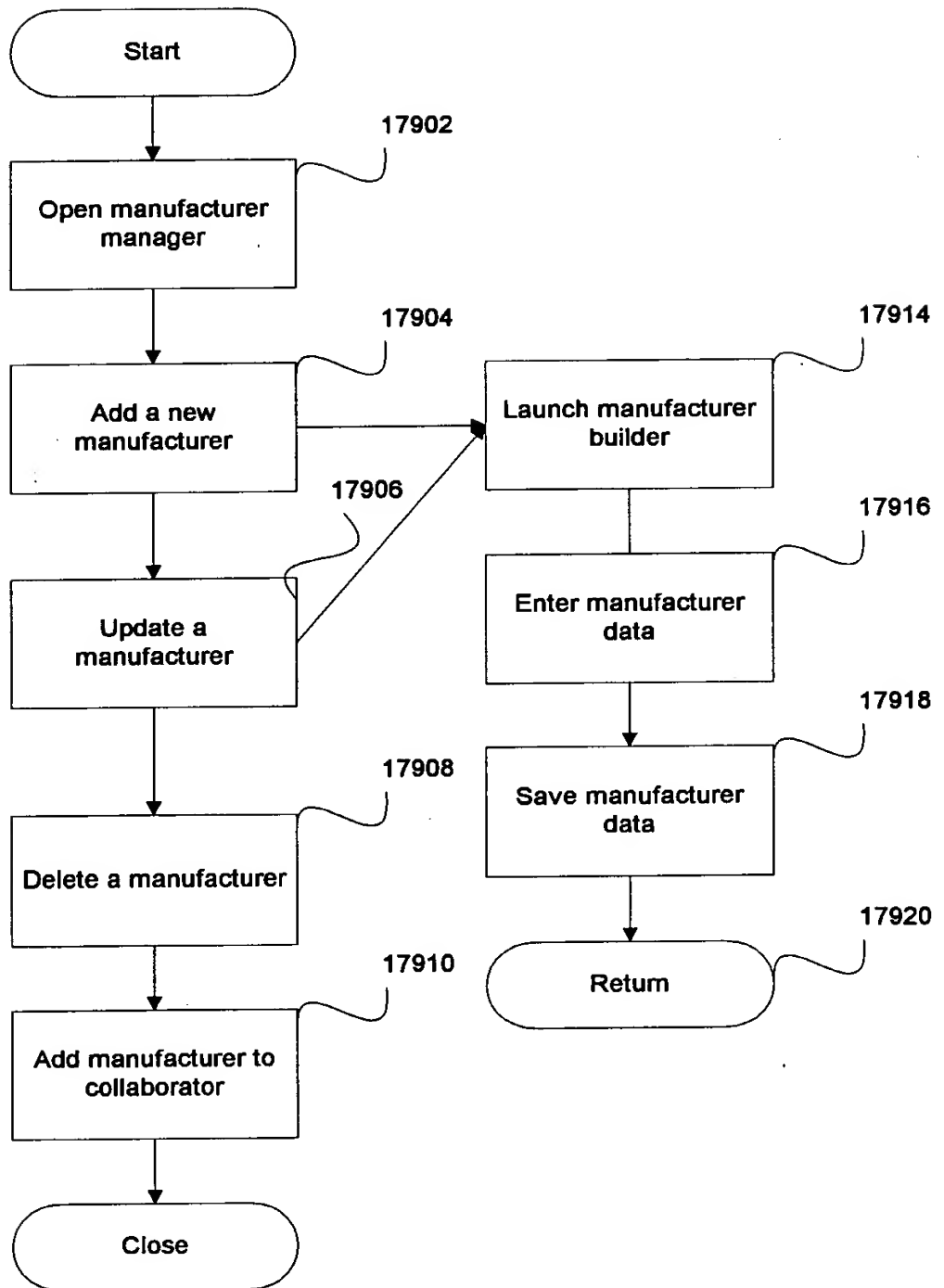


FIGURE 179



002080" GETEE550

18000

# Manufacturer Manager

Name	Phone	Street	City
Mother Earth	(800) 123-4567	Atmosphere and...	Milky Way
Emerald BioStructures, Inc.	(888) 780-8535	7865 NE Day R...	Bainbridge Islar
Sigma Chemical Co.	(800) 325-3010	P.O. Box 14508	St. Louis
Fluka Chemical Corp.	(800) 358-5287	1001 W St. Paul...	Milwaukee
Aldrich Chemical Co.	(800) 558-9160	P.O. Box 2060	Milwaukee
Fisher Scientific Co.	(800) 766-7000	585 Alpha Dr.	Pittsburgh
VWR Scientific Products Co...	(800) 932-5000	1310 Goshen P...	West Chester
J. T. Baker	(800) 582-2537	222 Red School...	Phillipsburg
Promega Corp.	(800) 356-9526	2800 Woods Ho...	Madison
Pierce Chemical Co.	(800) 874-3723	3747 N Meridian...	Rockford
Mallinckrodt	(800) 354-2050	222 Red School...	Phillipsburg
ICN Pharmaceuticals, Inc.	(800) 854-0530	3300 Hyland Ave.	Costa Mesa
Bio-Rad Laboratories	(800) 424-6723	2000 Alfred Nob...	Hercules
Amersham Pharmacia Biote...	(800) 526-3593	800 Centennial ...	Piscataway
Invitrogen Corp.	(800) 955-6288	1600 Faraday A...	Carlsbad
Calbiochem-Novabiochem C...	(800) 854-3417	P.O. Box 12087	La Jolla
Hampton Research Corp.	(800) 452-3899	27632 El Lazo Rd.	Laguna Niguel

18001

New... 18002

Update... 18004

Delete 18006

Add to Collab 18008

Help... 18010

Close 18012

FIG. 180



Update Emerald BioStructures, Inc.

Name:	Emerald BioStructures, Inc.	18200
Phone:	(888) 780-8535	18202
Street:	7865 NE Day Rd. W	18204
City:	Bainbridge Island	18206
State:	WA	18208
Zip:	98110	18210
Country:	USA	18212
Email:	info@emeraldbiostructures.com	18214
HTTP:	http://www.emeraldbiostructures.com	18216
Fax:	(206) 780-8549	18218
Dept:		18220

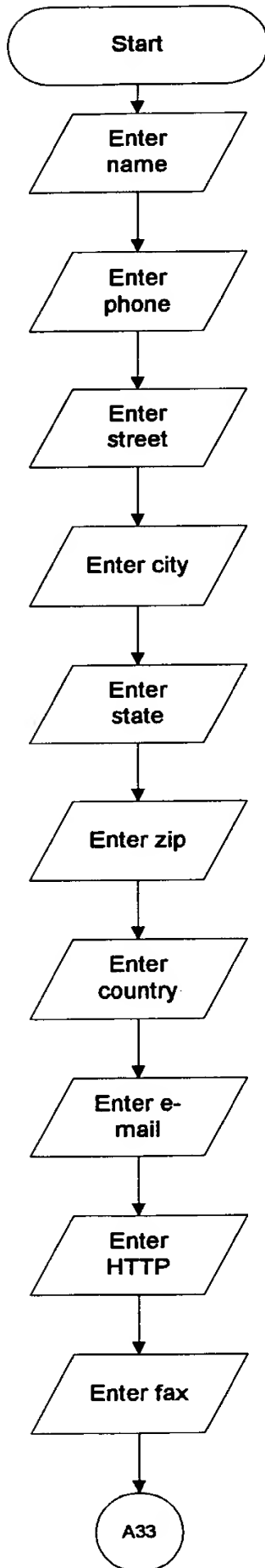
Connect...

OK Cancel

18224 18226

FIG. 182

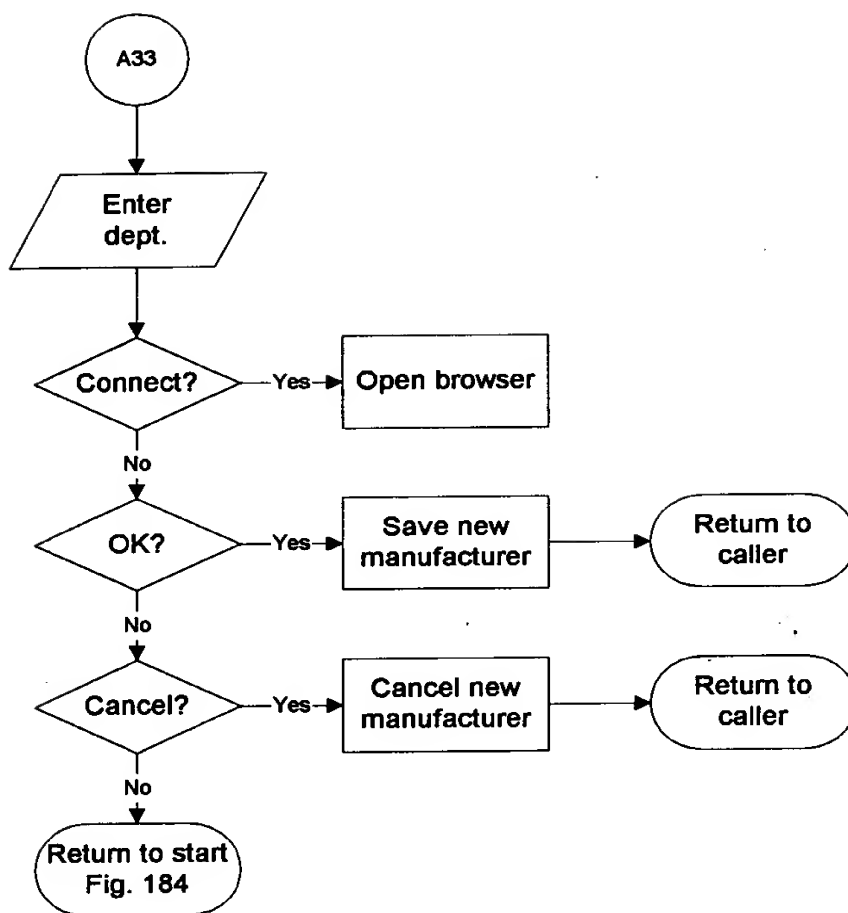
002080" ESTE960



**FIGURE 183**



002080 "ENTERED" 0963135 080200



**FIGURE 184**

002080" 59TTE960

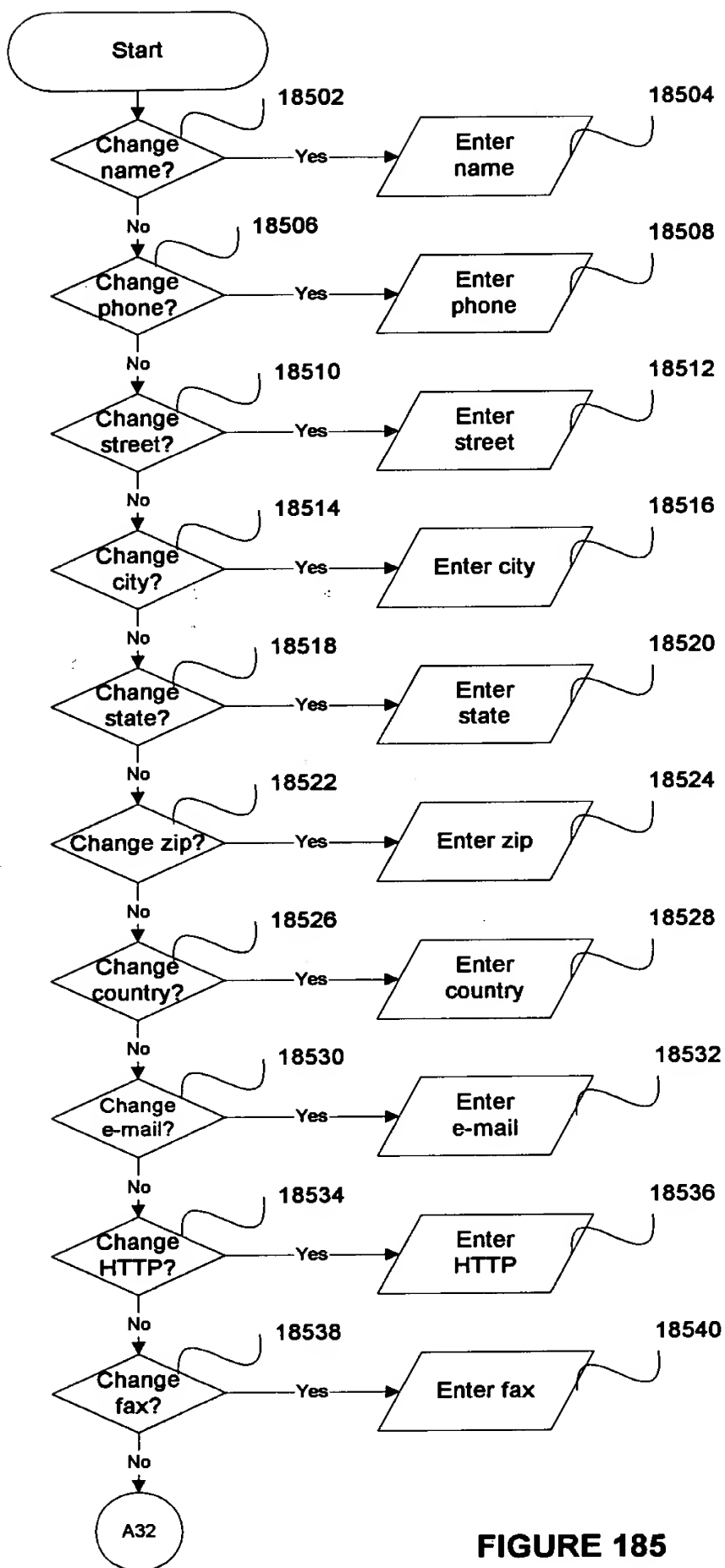


FIGURE 185

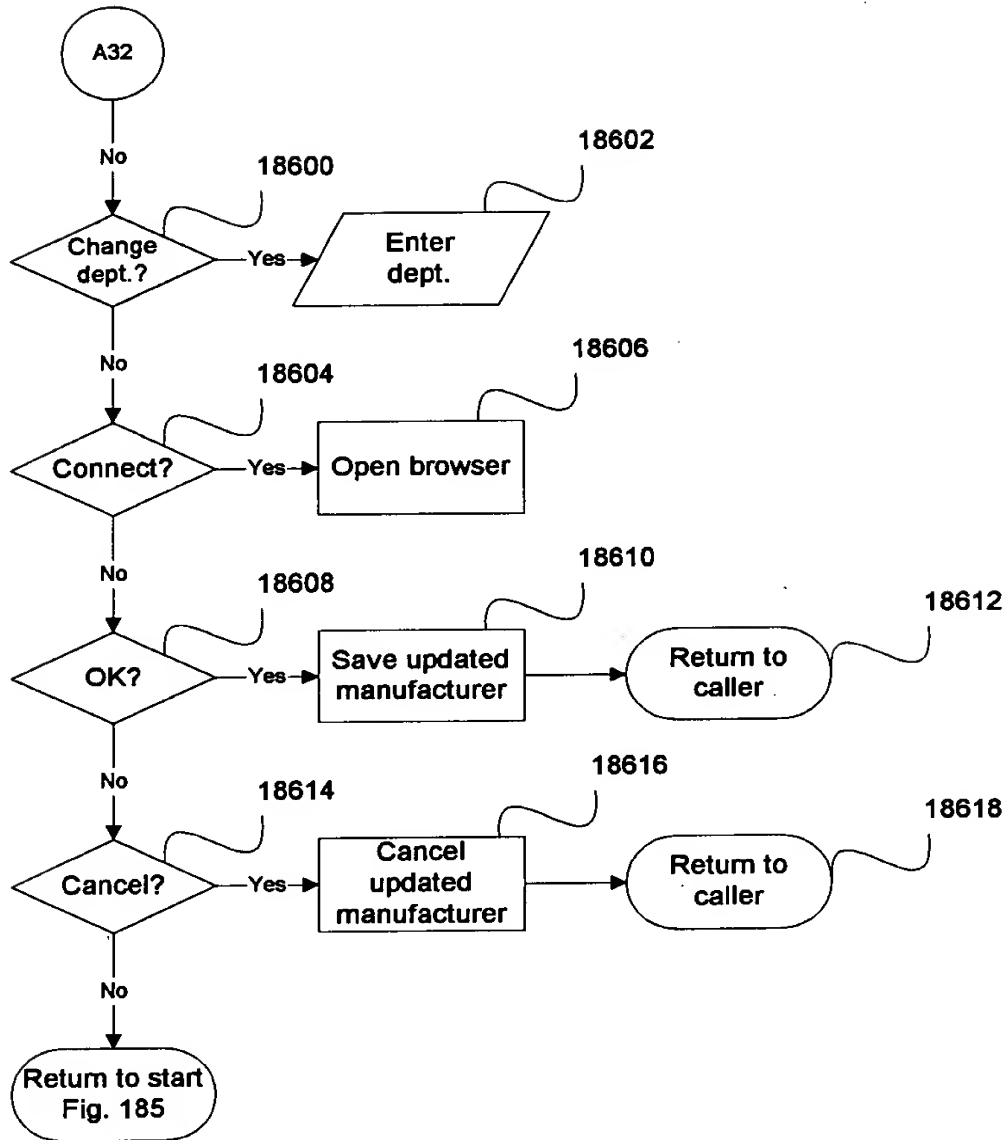
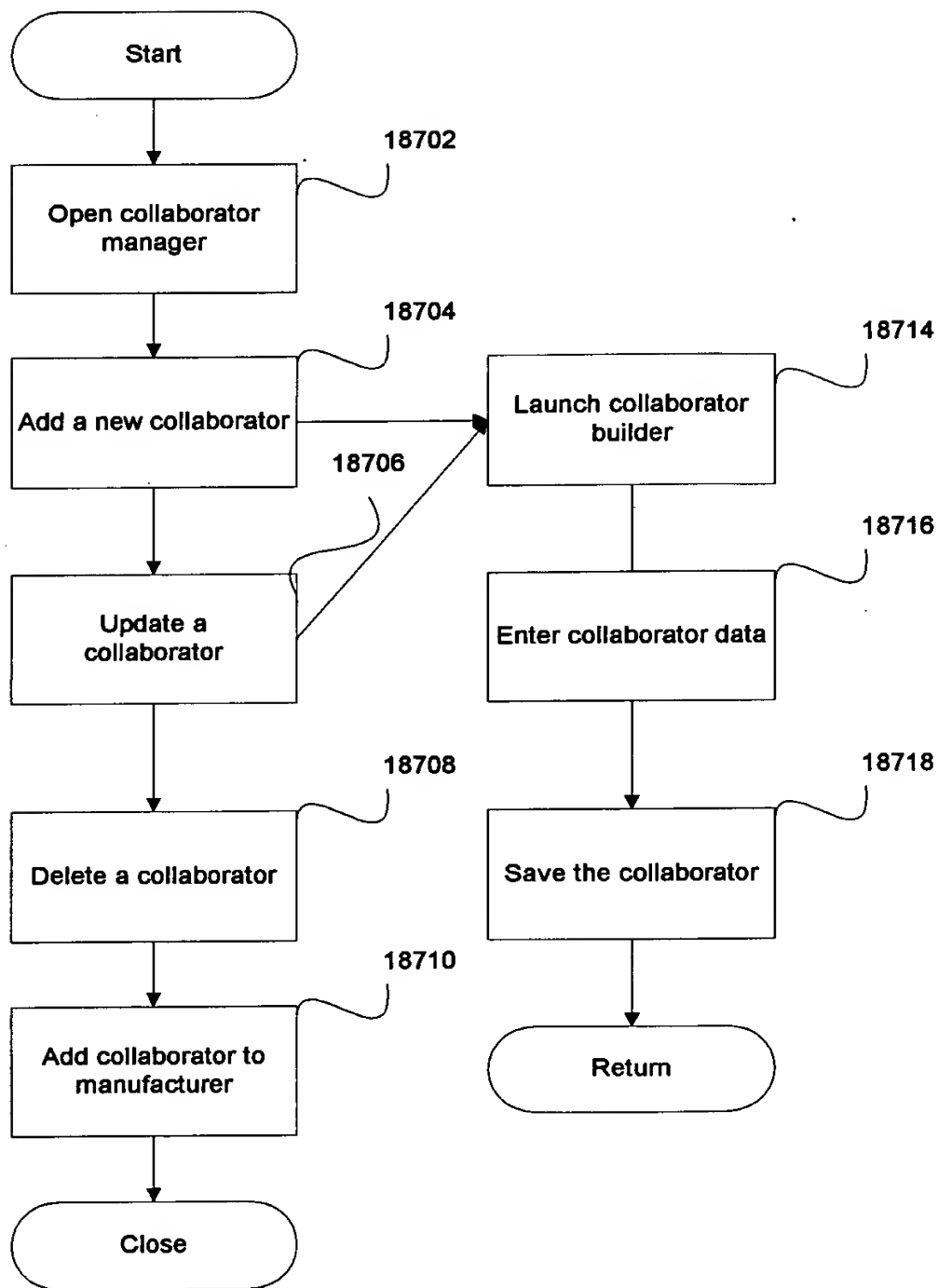


FIGURE 186



**FIGURE 187**

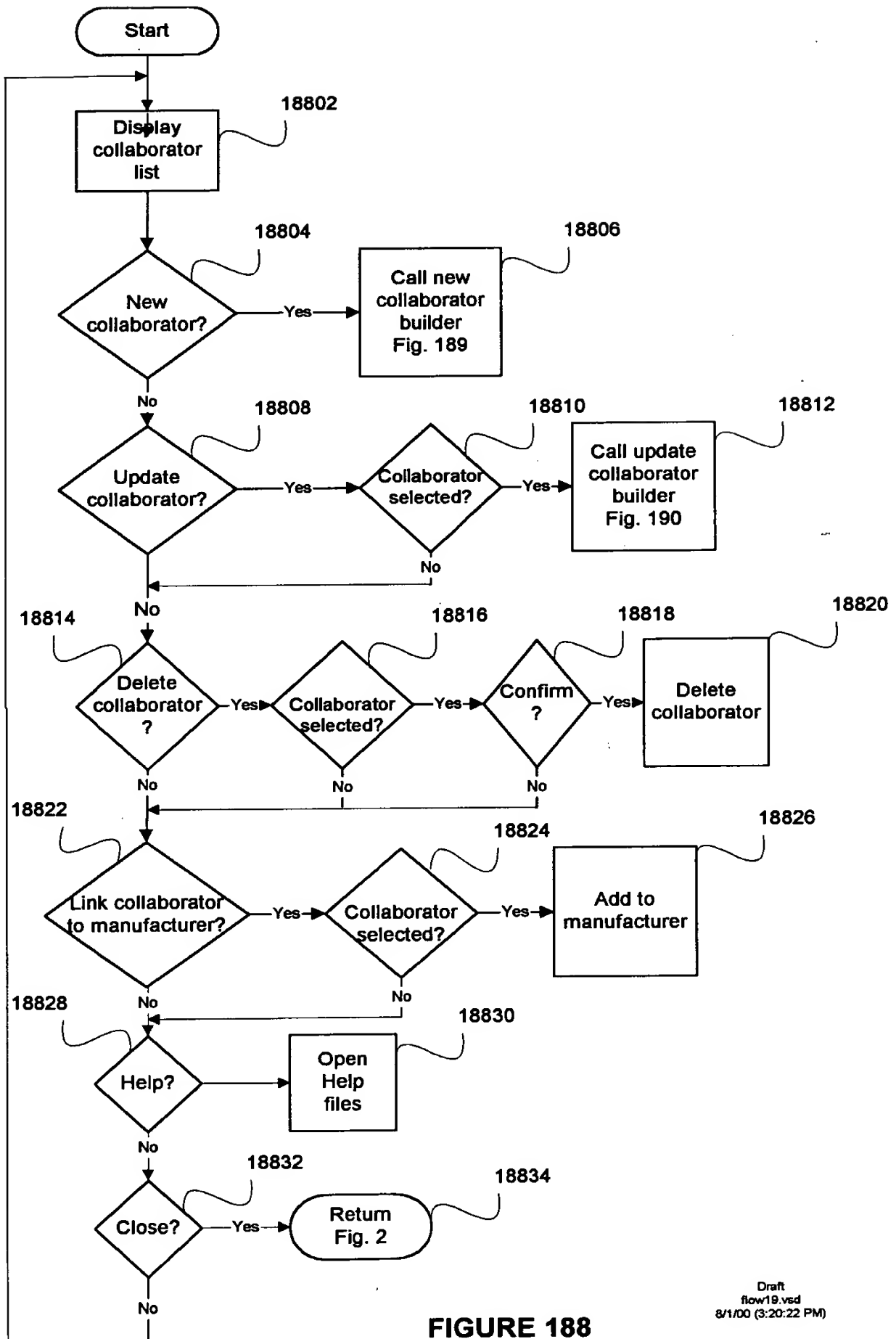


FIGURE 188

```

graph TD
    Start([Start]) --> 18902[Enter Name]
    18902 --> 18904[Enter Phone]
    18904 --> 18906[Enter Street]
    18906 --> 18908[Enter City]
    18908 --> 18910[Enter State]
    18910 --> 18912[Enter Zip]
    18912 --> 18914[Enter Country]
    18914 --> 18916[Enter Email]
    18916 --> 18918[Enter HTTP]
    18918 --> 18920[Enter Fax]
    18920 --> 18922[Enter Dept.]
    18922 --> 18924{Connect?}
    18924 -- Yes --> 18926[Open Internet browser]
    18924 -- No --> 18928{OK?}
    18928 -- Yes --> 18930[Save new collaborator]
    18928 -- No --> 18934{Cancel?}
    18930 --> 18932([Return to caller])
    18934 -- Yes --> 18936[Cancel new collaborator]
    18936 --> 18938([Return to caller])
    18938 --> 18902

```

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flow19.vsd  
8/1/00 (3:25:44 PM)

002090 " 087E960

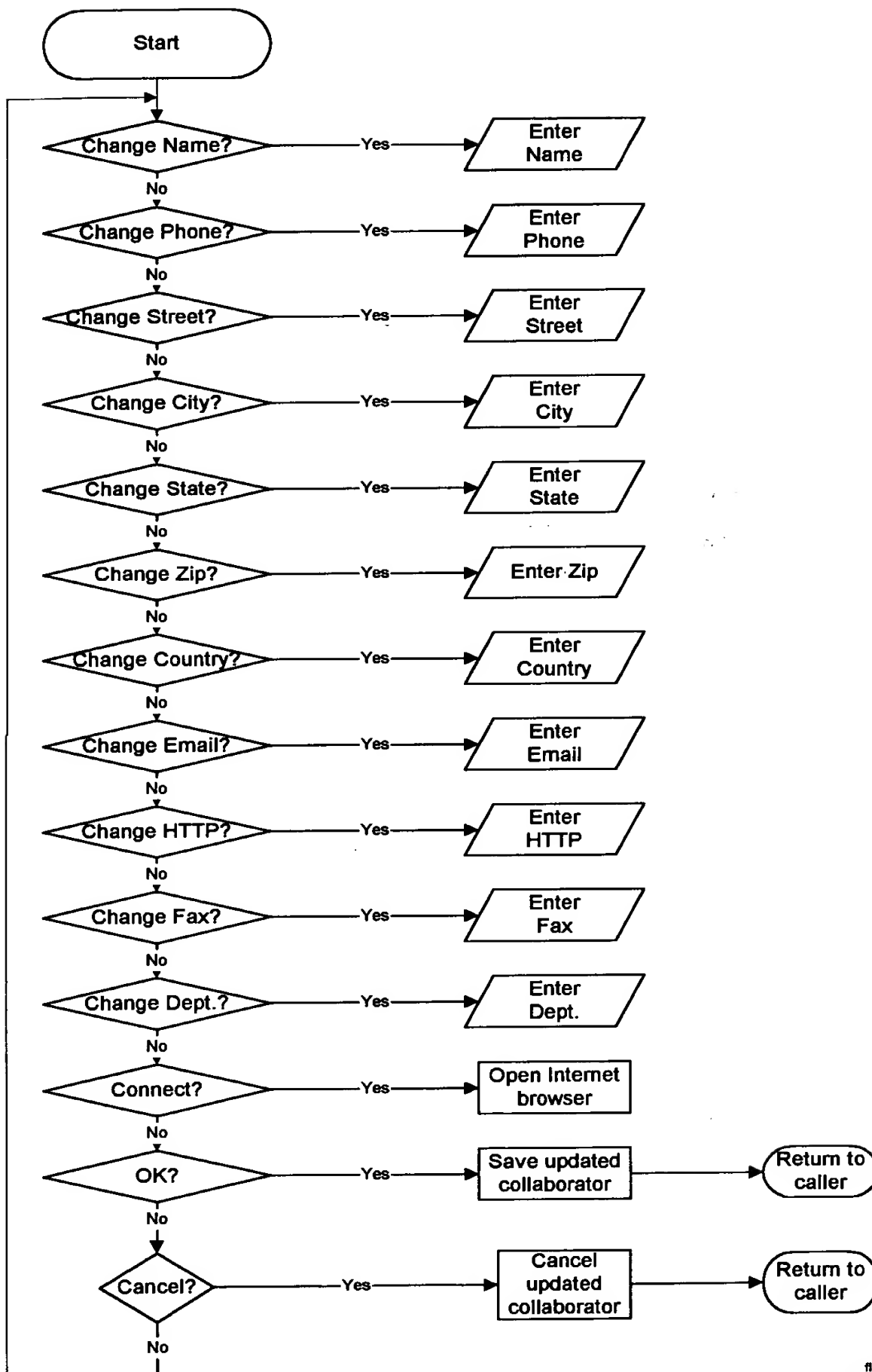
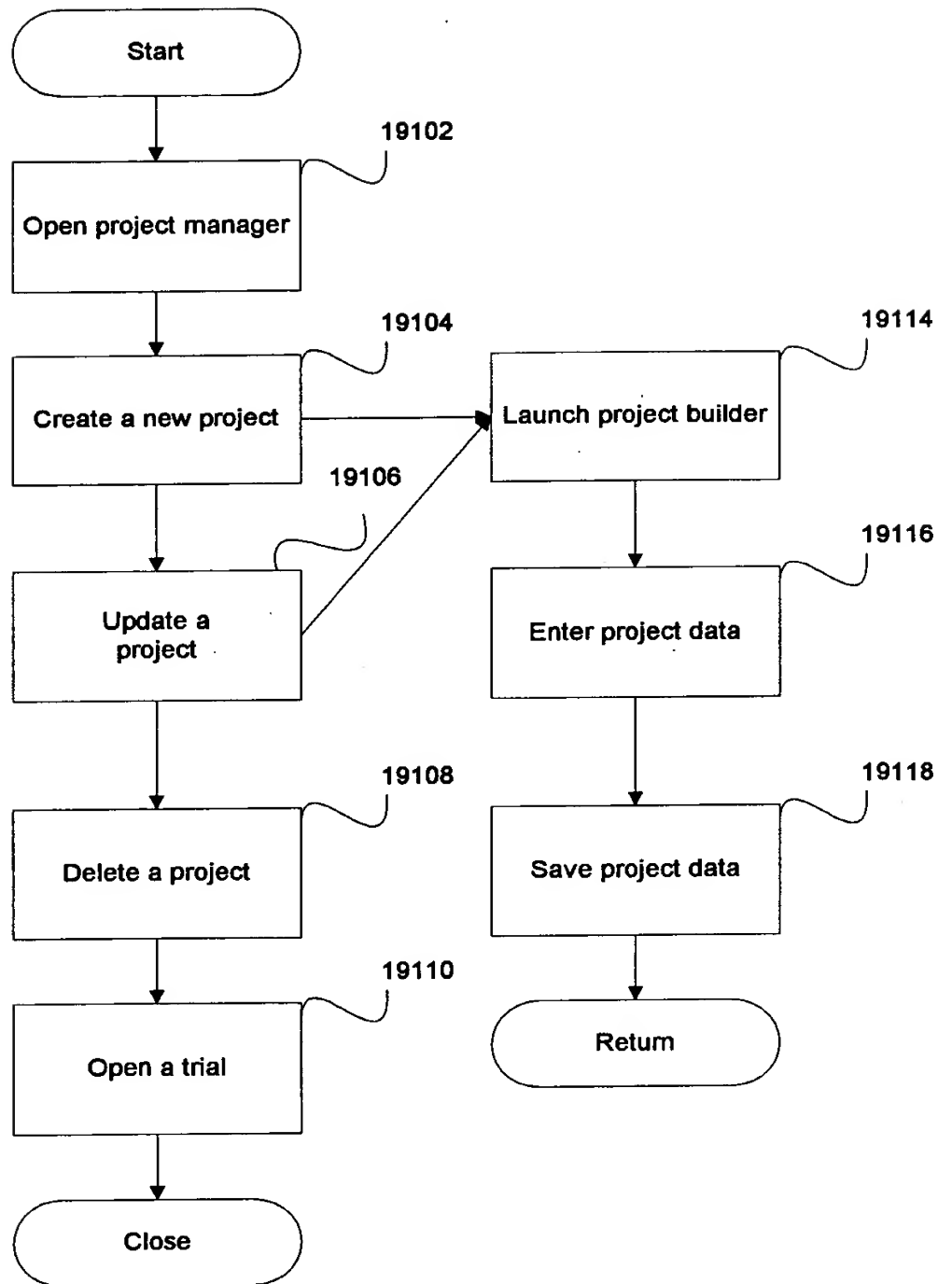


FIGURE 190



**FIGURE 191**



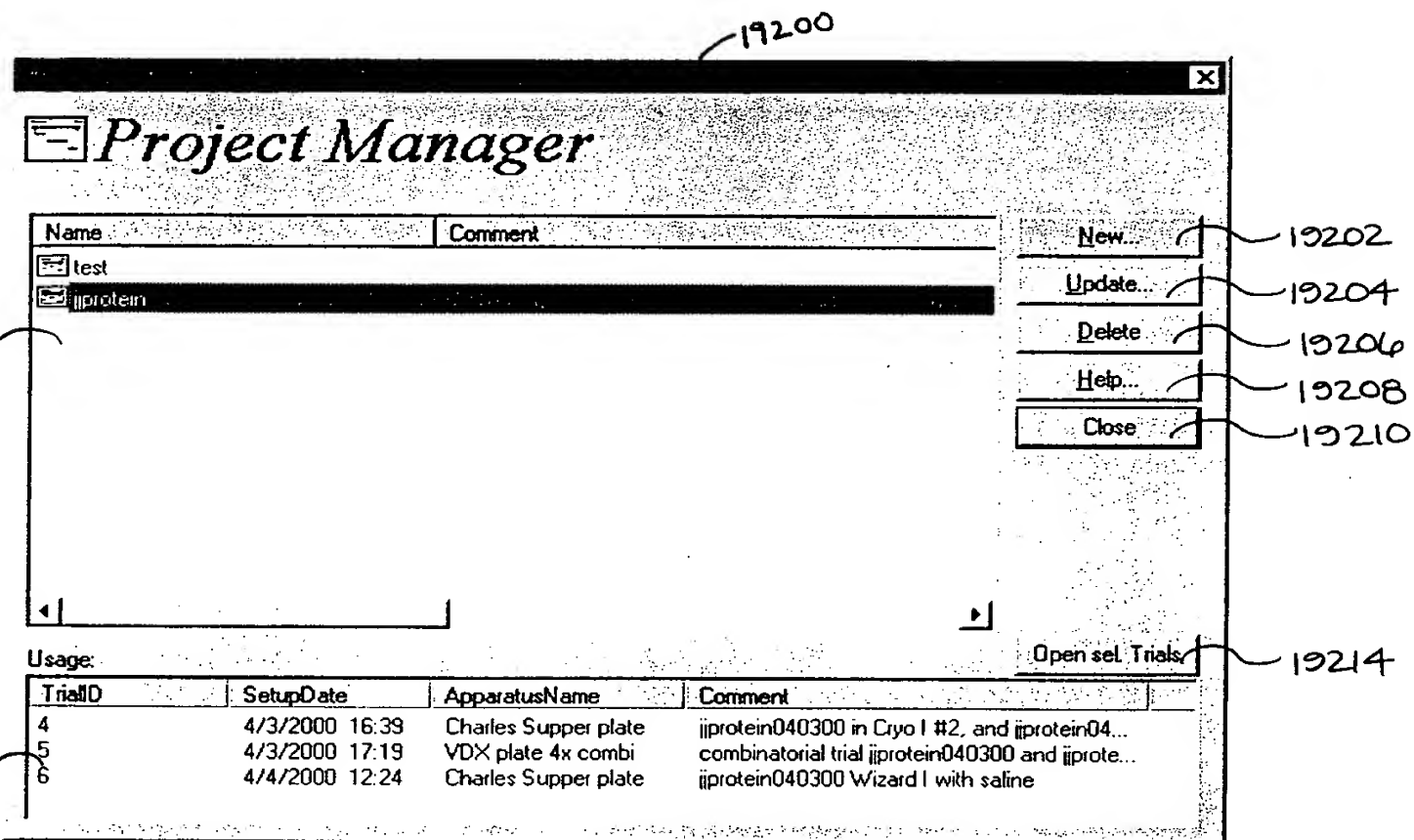


Fig. 192

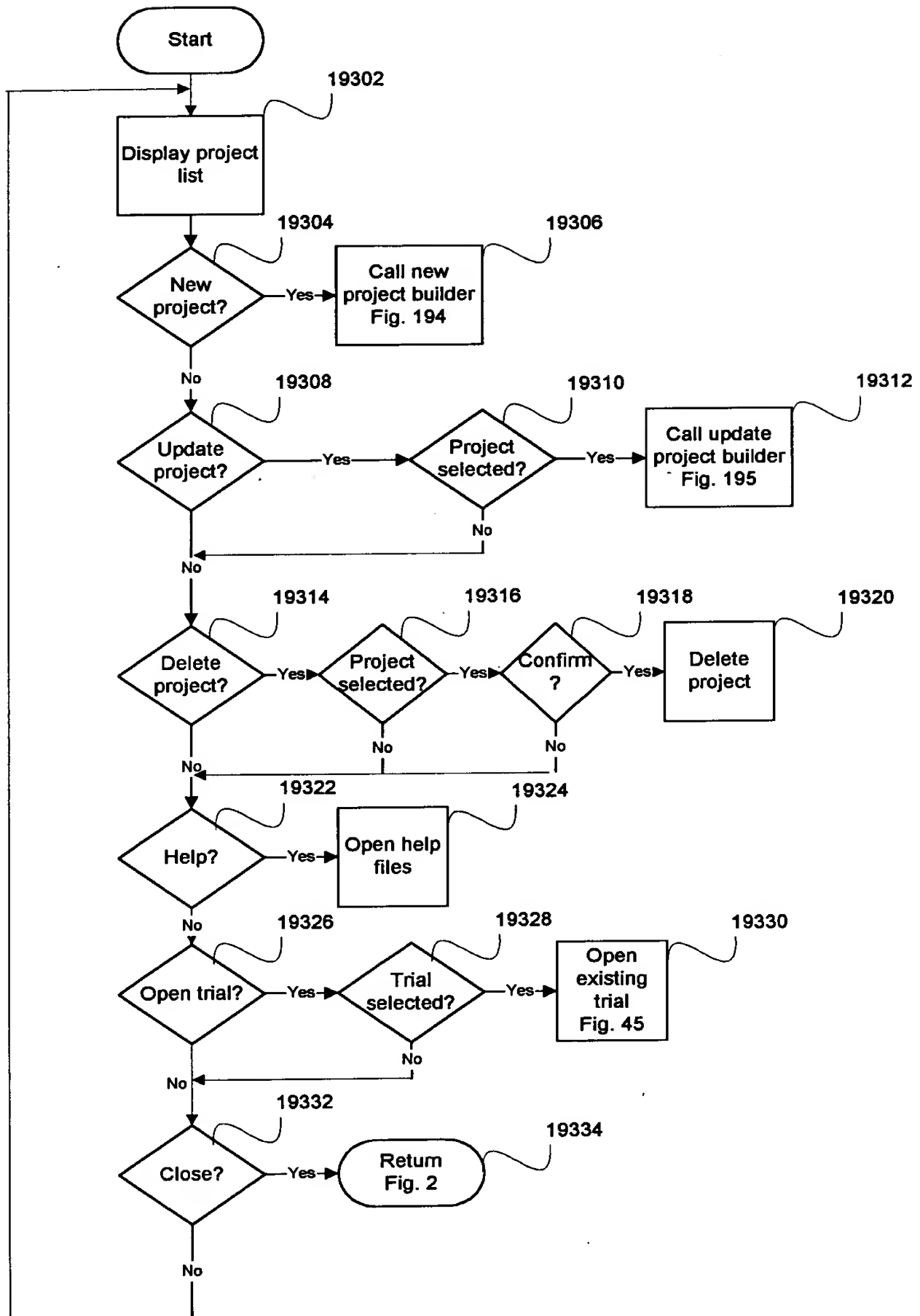
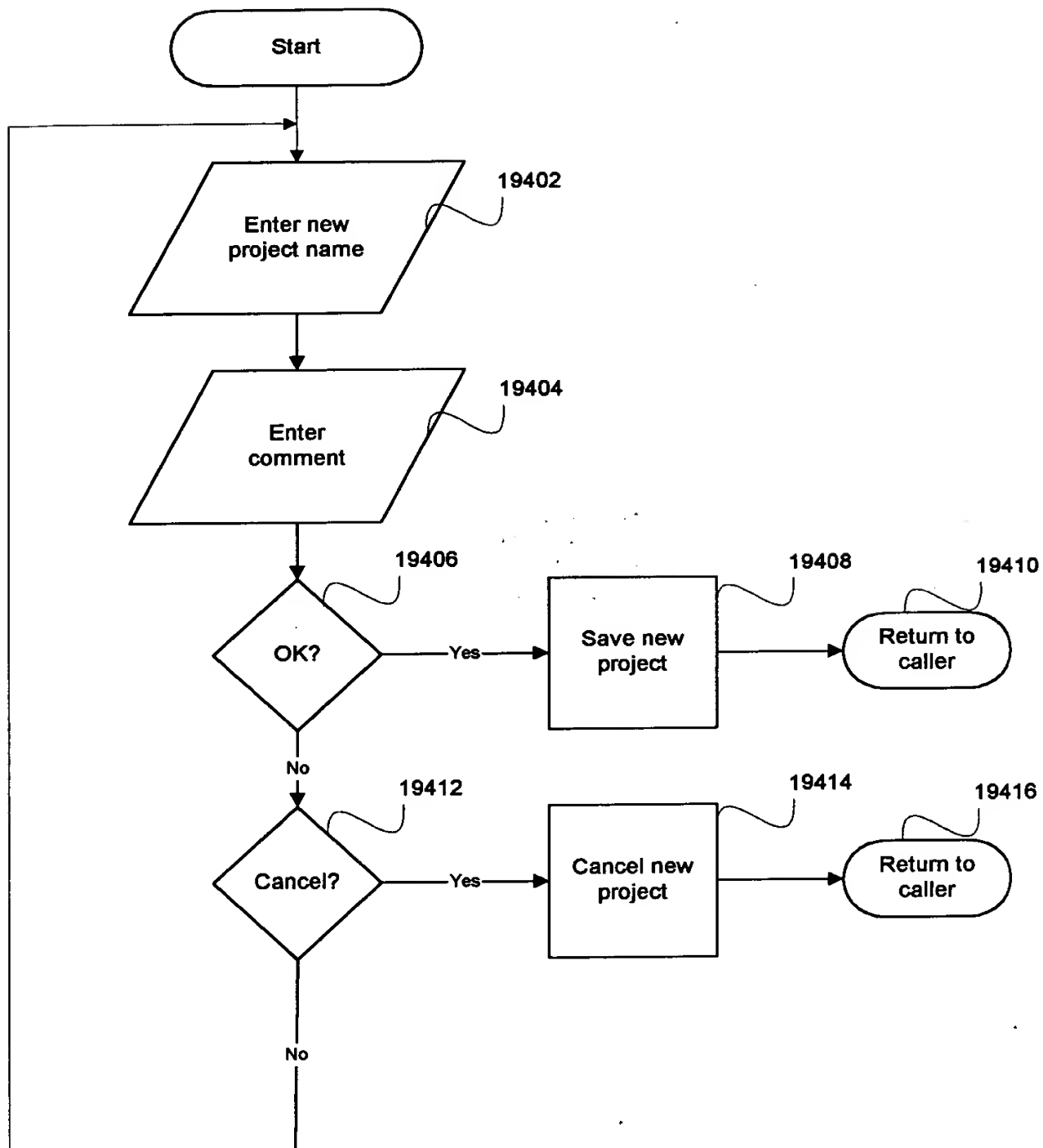


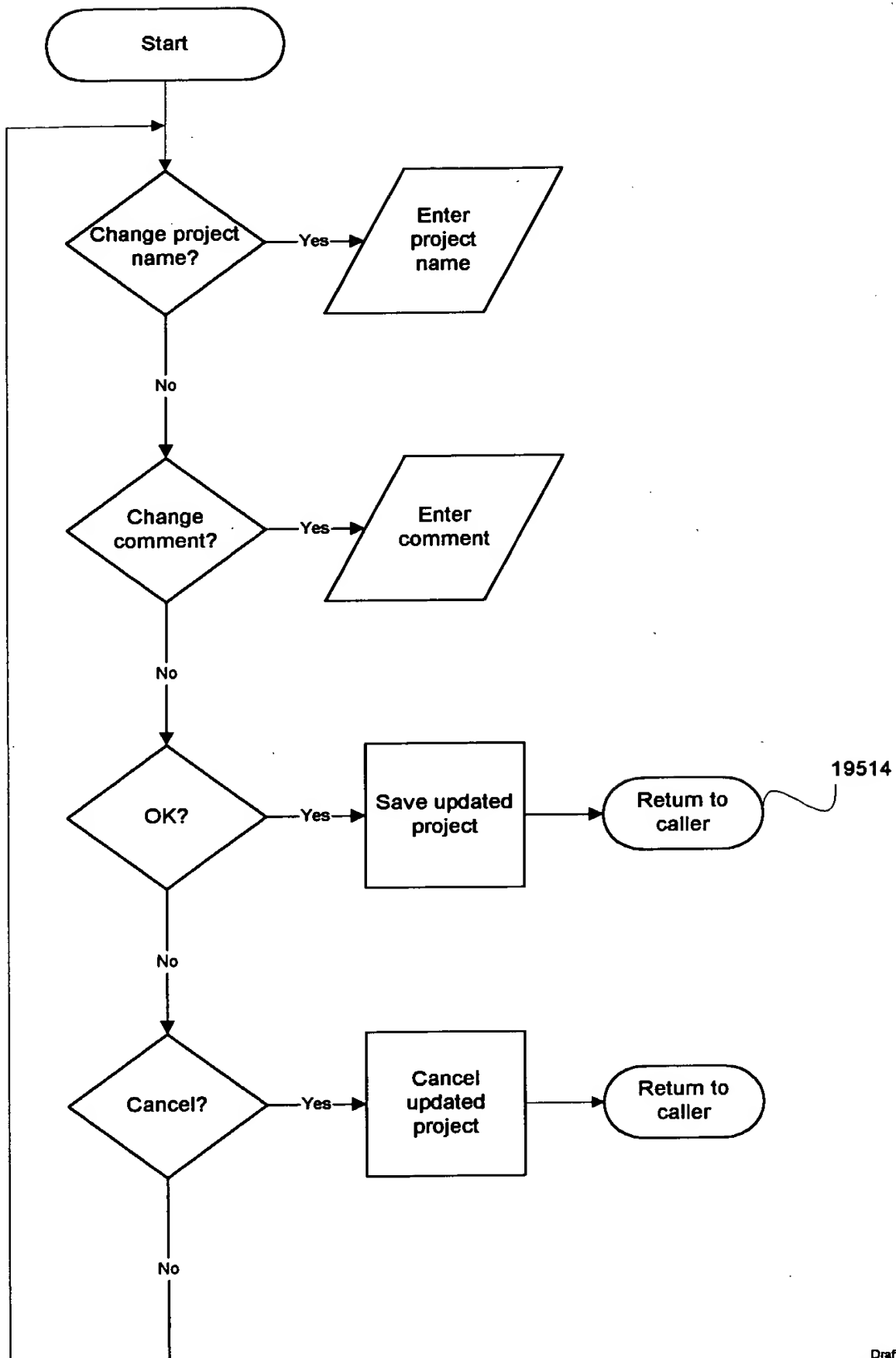
FIGURE 193

002080" 58T960



**FIGURE 194**

002030" 58TTE960



Draft  
flow19.vsd  
8/1/00 (3:53:11 PM)

FIGURE 195

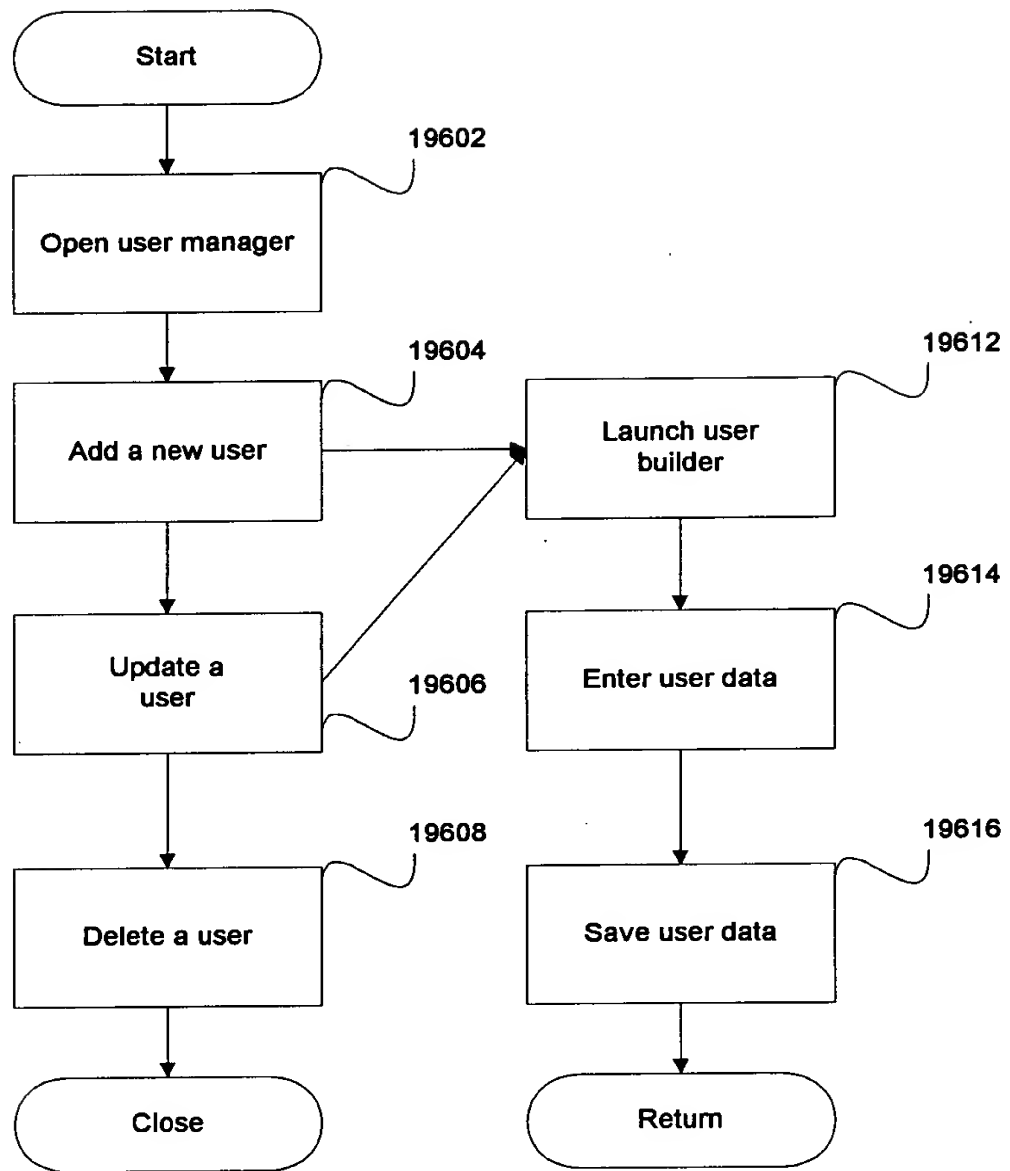


FIGURE 196

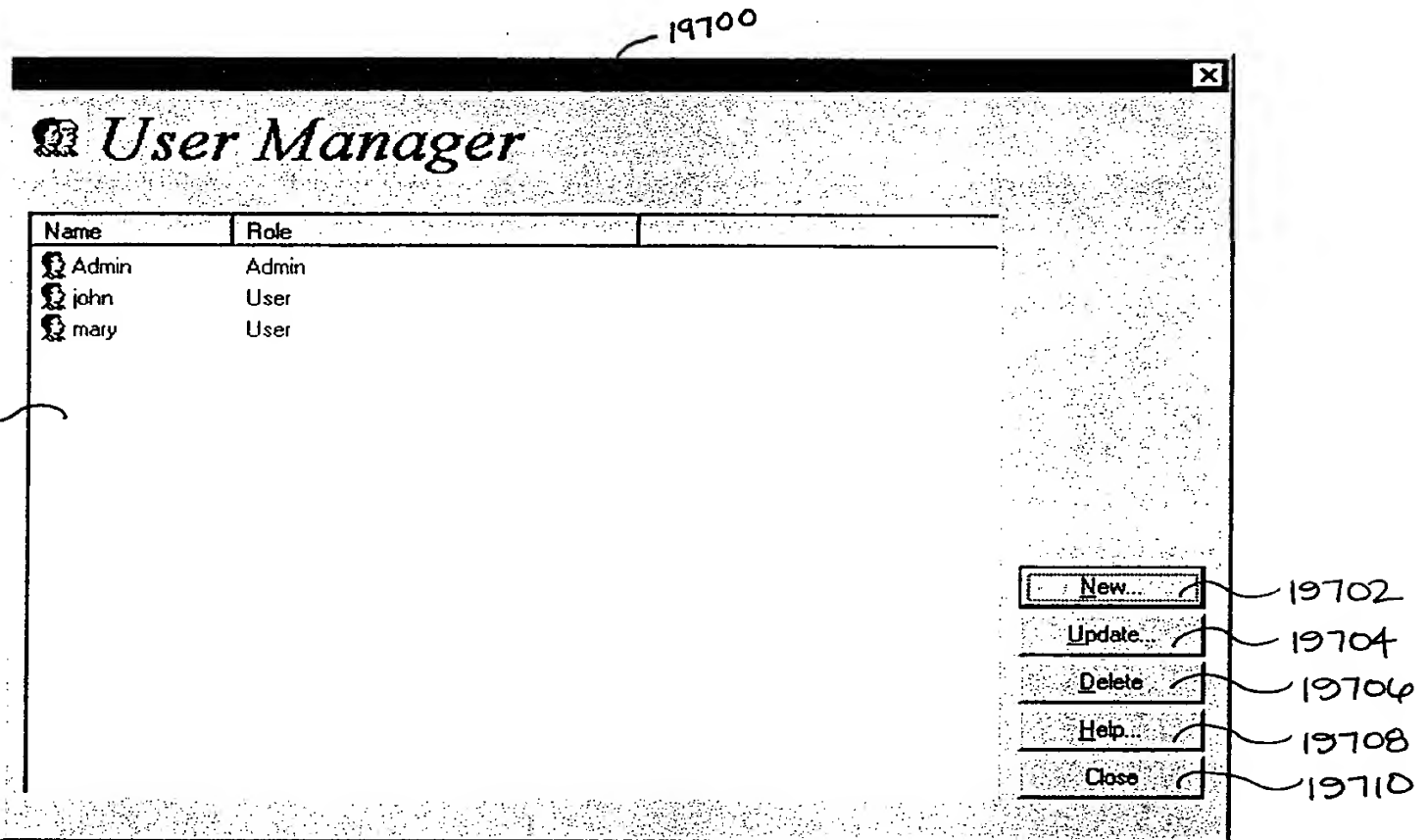


FIG. 197

002080" 5877E960

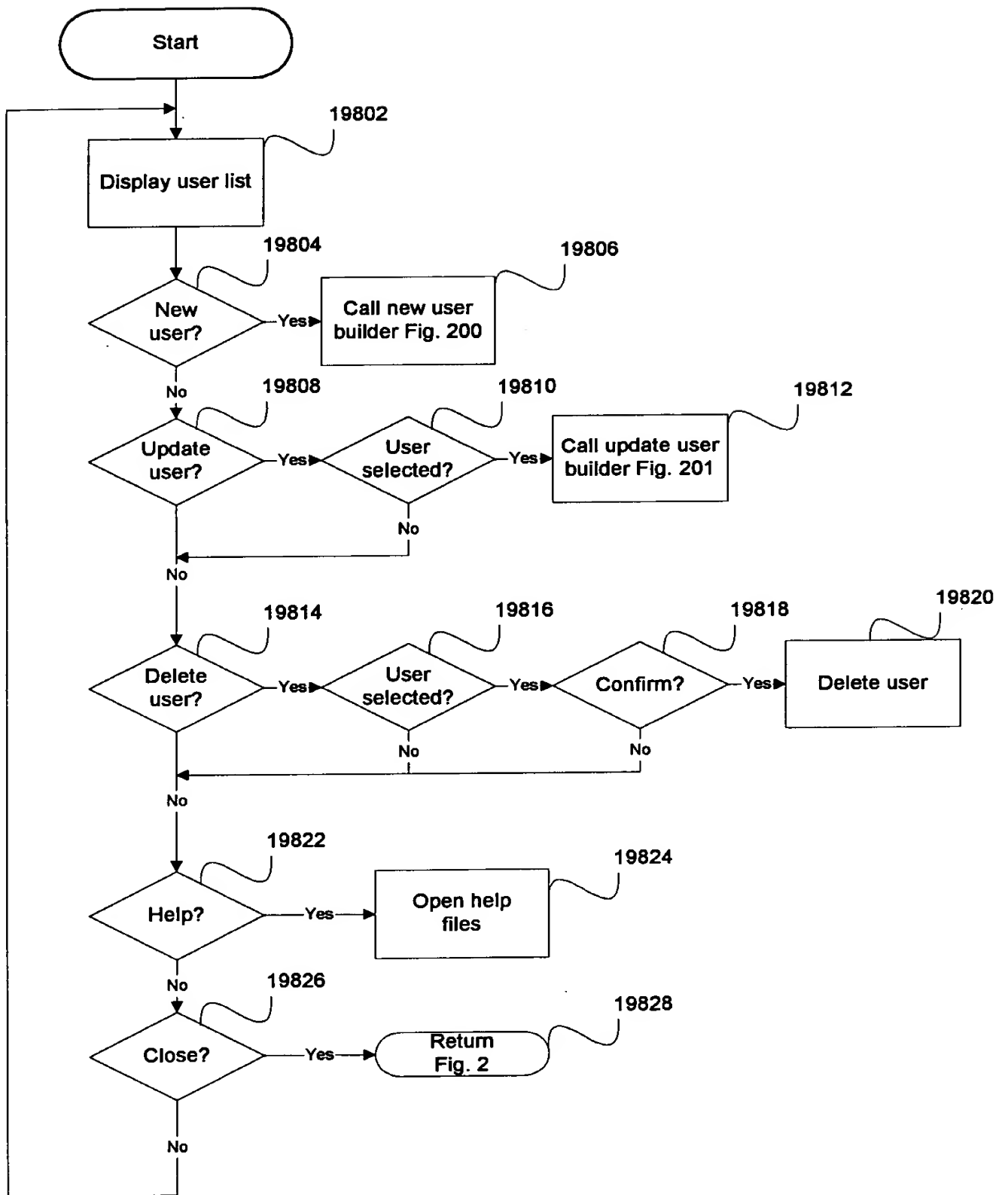
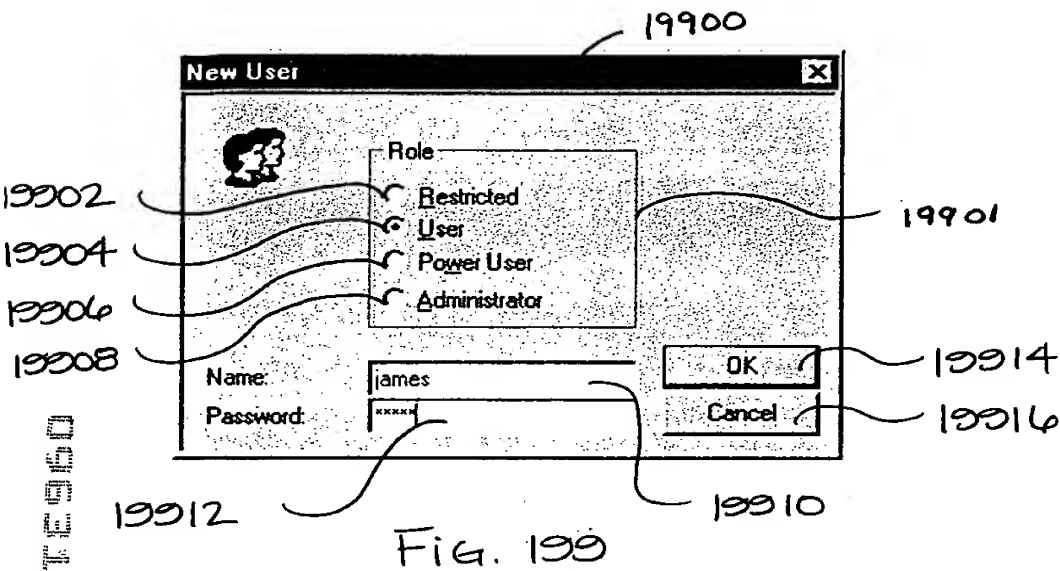


FIGURE 198

0963185.030200  
002080" 58772960





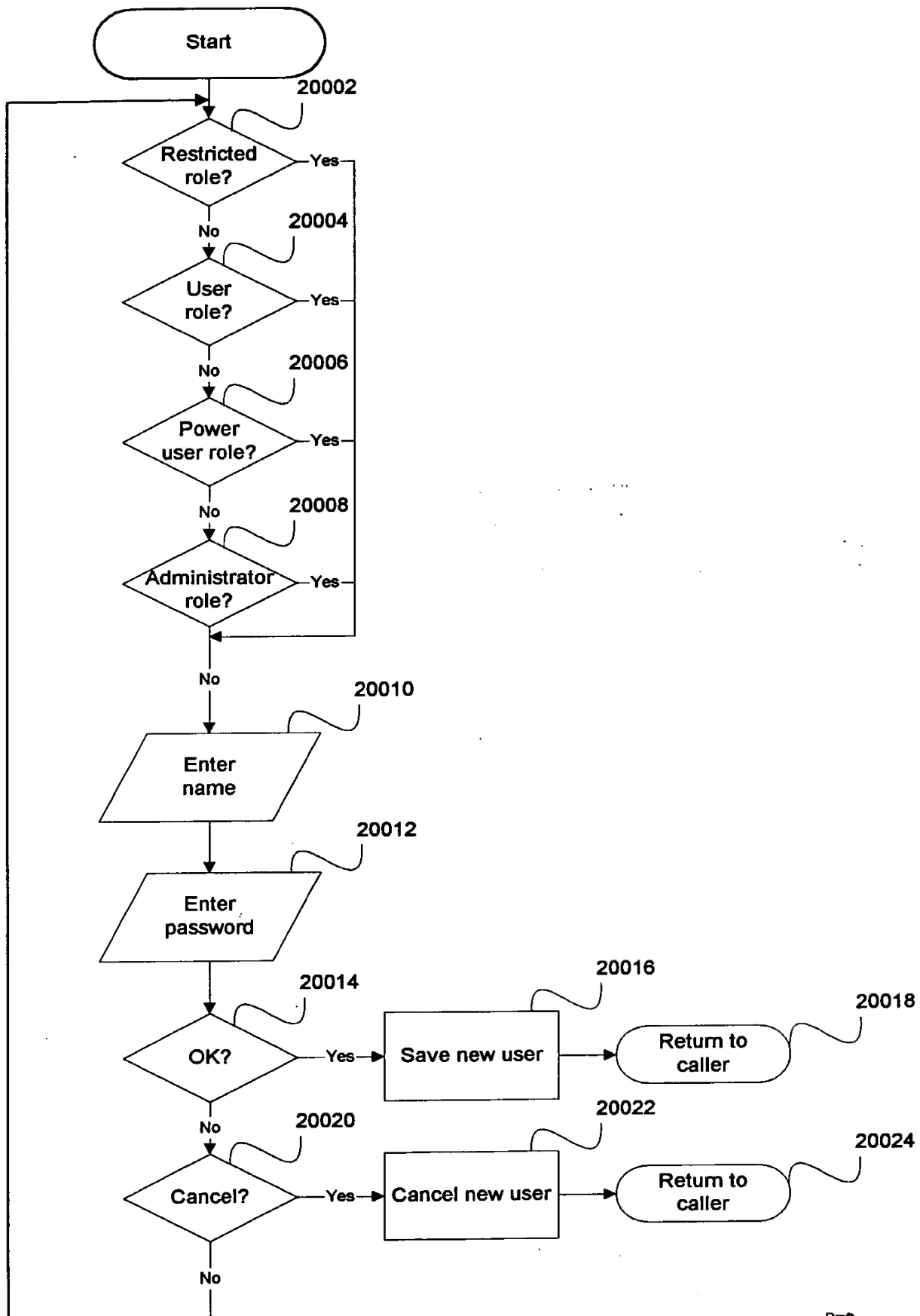


FIGURE 200

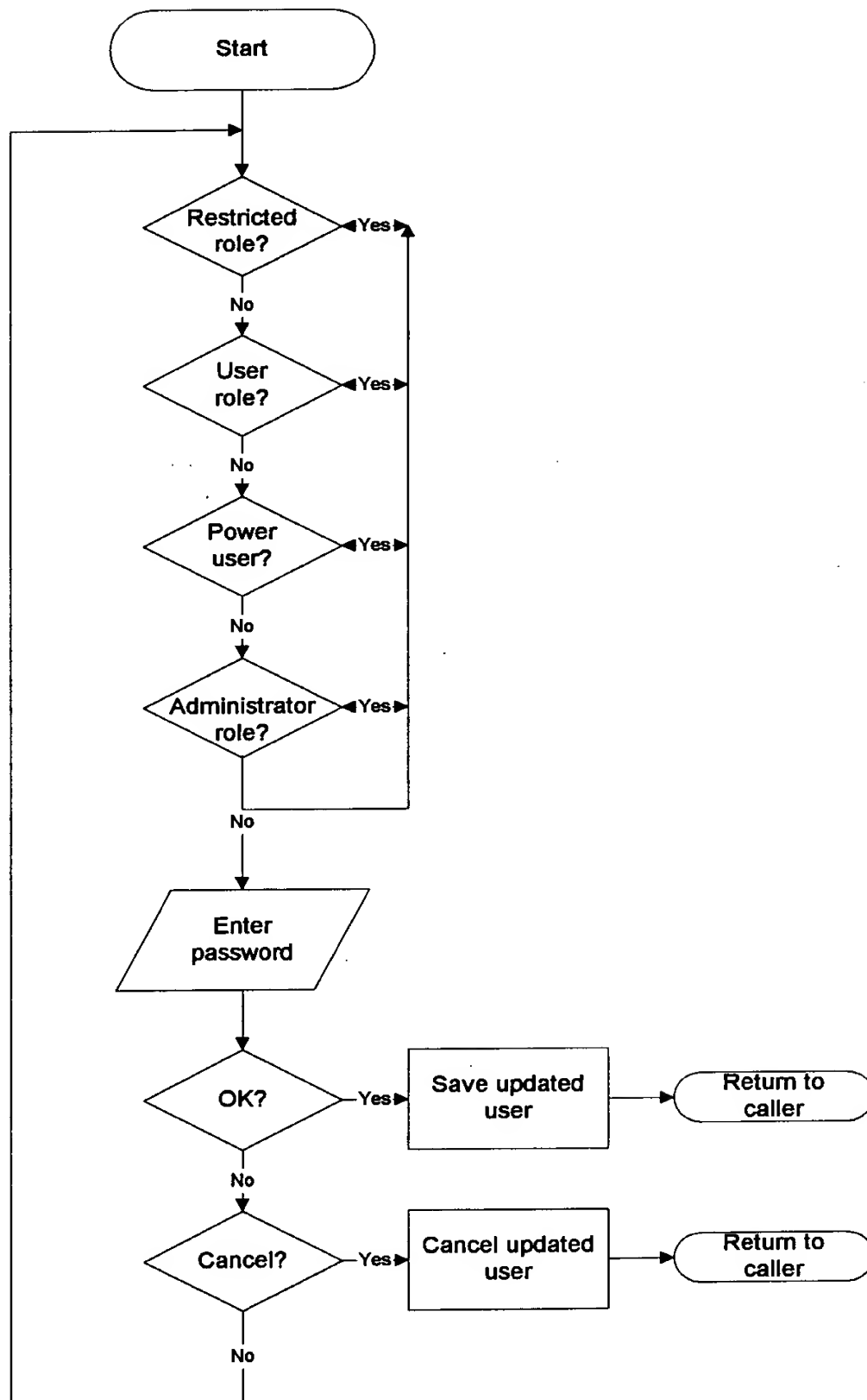
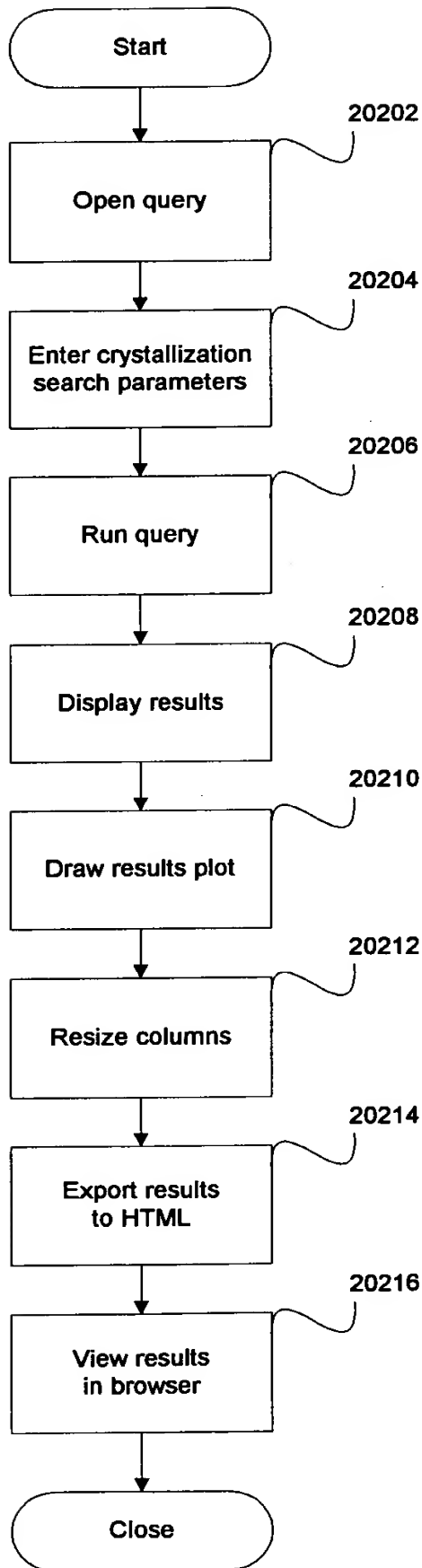


FIGURE 201



**FIGURE 202**



002080" 591155" 080200

20302

20300

20301

20304

20306

20308

20312

20310

20314

20316

Crystal Query

Draw plot... Query 1 Fixed Resize Exp. to HTML... View in Browser...

Types

- ☐ Spherulite
- ☐ PhaseSep.
- ☐ Skin
- ☐ Precipitate
- ☒ MicroCrystal

Shapes

- ☒ Needle
- ☒ Plate
- ☒ Pyramid
- ☒ Block
- ☒ Hexagon
- ☒ Leaf
- ☒ Urchin
- ☒ Rod

Sizes

- ☒ Tiny
- ☒ Small
- ☒ Medium
- ☒ Big

Misc.

- ☐ Twin
- ☐ Clear
- ☐ Image

User def.

- ☐ User def 1
- ☐ User def 2
- ☐ User def 3

T...	S...	W...	Crystall...	Size	C...	Te...	Morphology	S (Cpk...)	Macro...	Compound Buffer
---	3	3	07	Wzrd1 07	n/a	n/a	25.00	MicroCrystal	iprotein040300	100.000 mM pH 6.00 MES/NaCl
•	3	3	13	Wzrd1 13	Tiny	1	25.00	Block	iprotein040300	100.000 mM pH 6.50 Na cacod
•	3	3	16	Wzrd1 16	Medium	n/a	25.00	Plate	iprotein040300	100.000 mM pH 6.20 Na2 H ph
▲	3	3	17	Wzrd1 17	Small	5	25.00	Pyramid	iprotein040300	100.000 mM pH 4.50 acetic aci

Help

Observation sessions which are open and not in recording mode are queried. Click on column heading for sorting. Double-click on a row to see drop composition details.

Close

Help...

FIG. 203

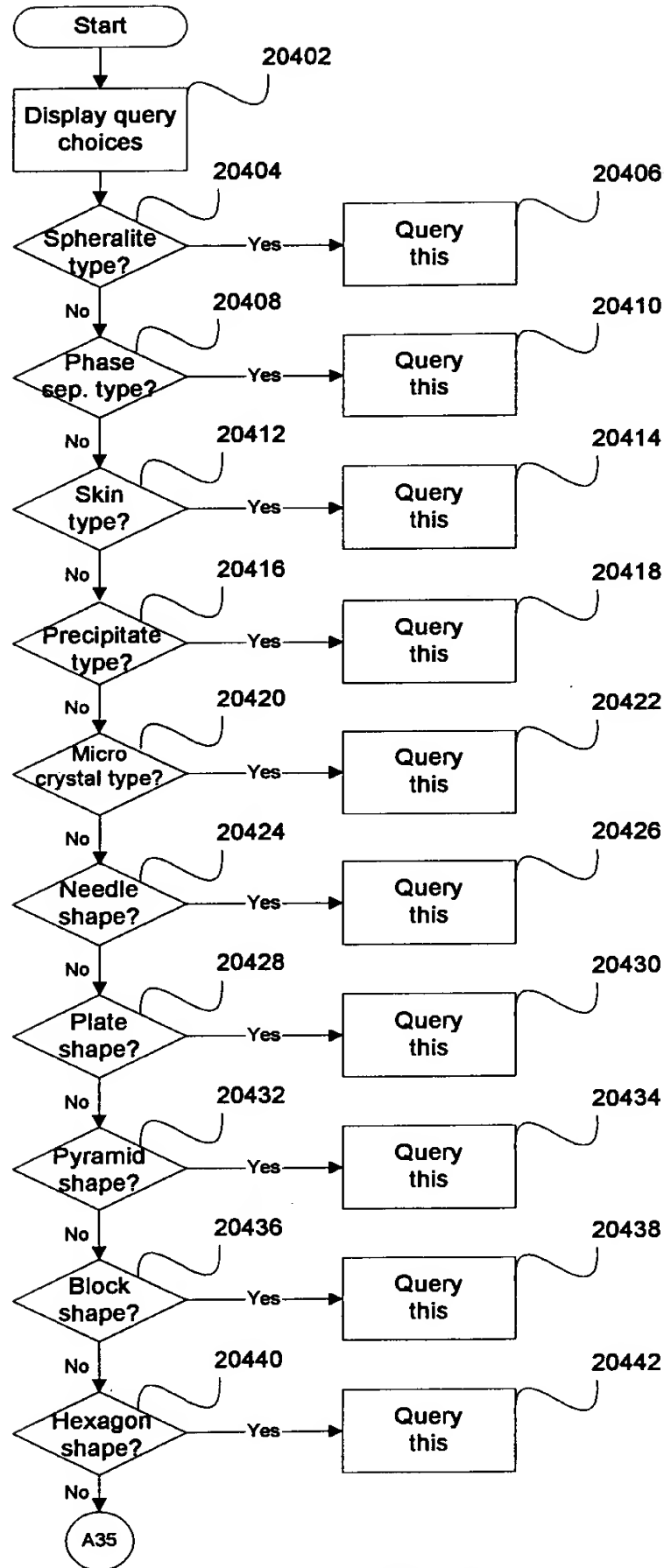


FIGURE 204

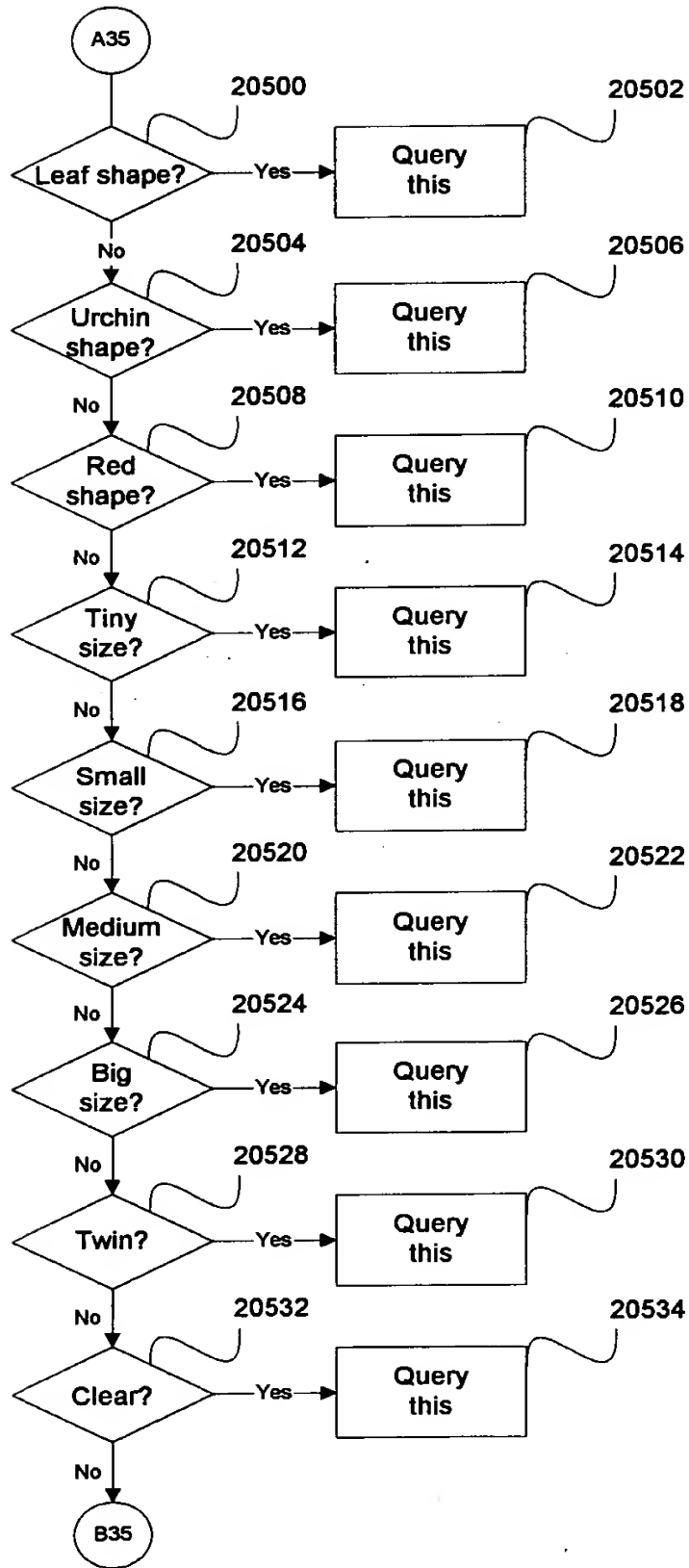


FIGURE 205

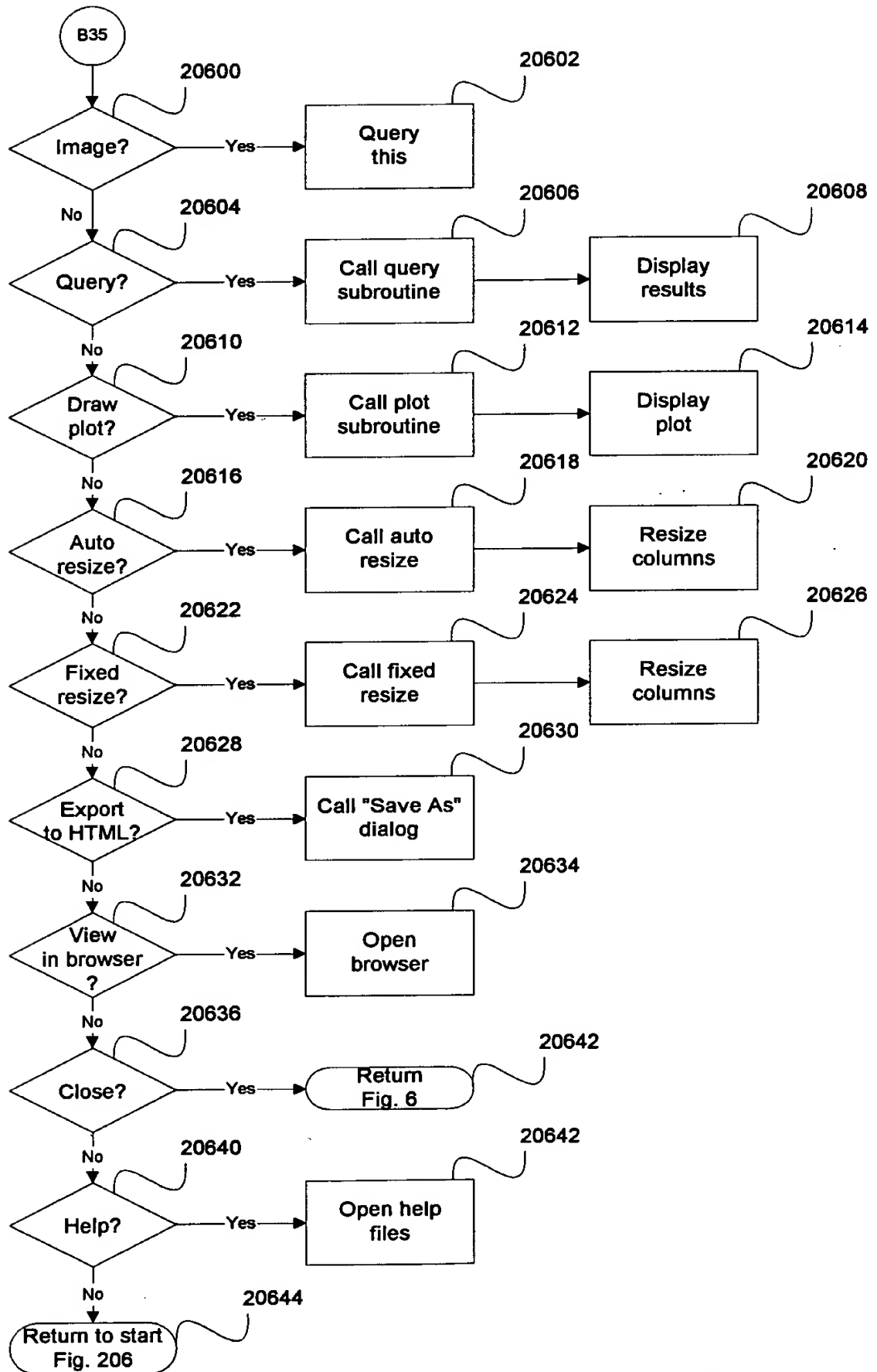
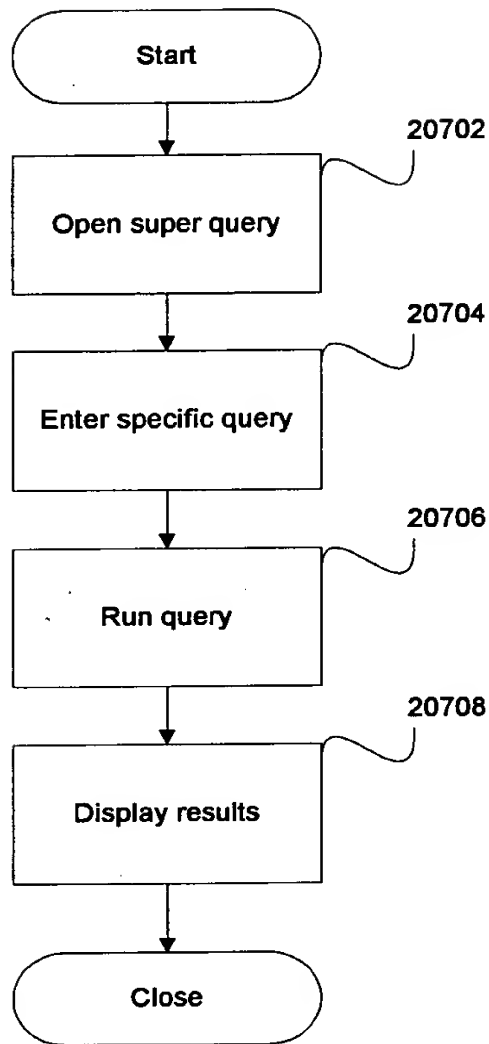


FIGURE 206

002080" 587E960



**FIGURE 207**





20800

20802

Crystal Monitor Super Query

Query #1: Show me all Trials where Crystals were obtained in the presence of the following chemical:

Catalog: 81268 CAS: 25322-68-3 Query 1

20804

TrialID	SetupDate	MatrixName	ProjectName	ApparatusName
3	4/3/2000 16:10	Wzd1	test	Charles Supper ...

20801

Notes

The super query is only a technology preview. Only one query is implemented. Many other queries will follow, once enough feedback has been collected from customers. Please send any query request to support@emeraldstructures.com.

OK

Cancel

Help...

20808

20810

20812

Fig. 208

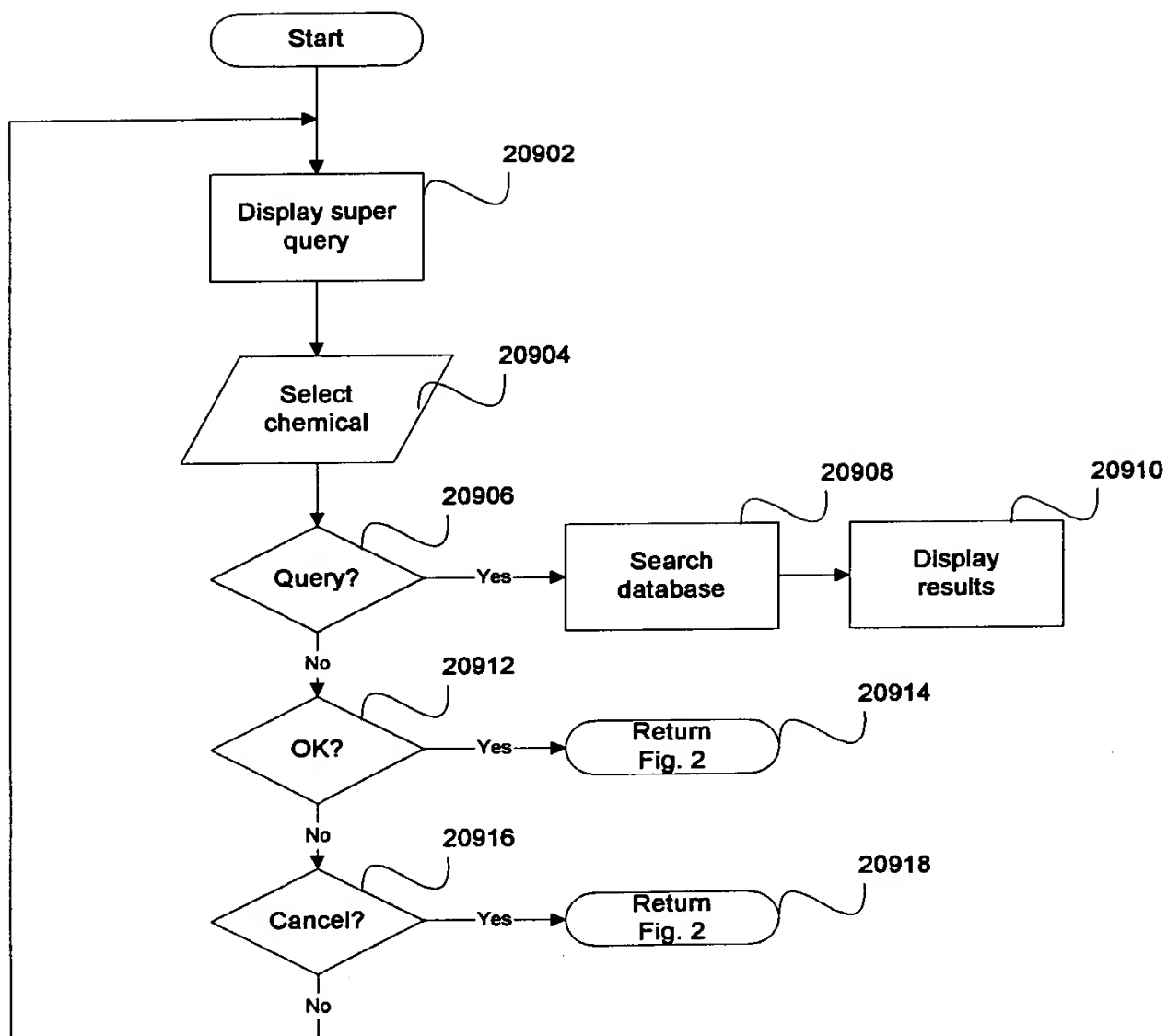


FIGURE 209

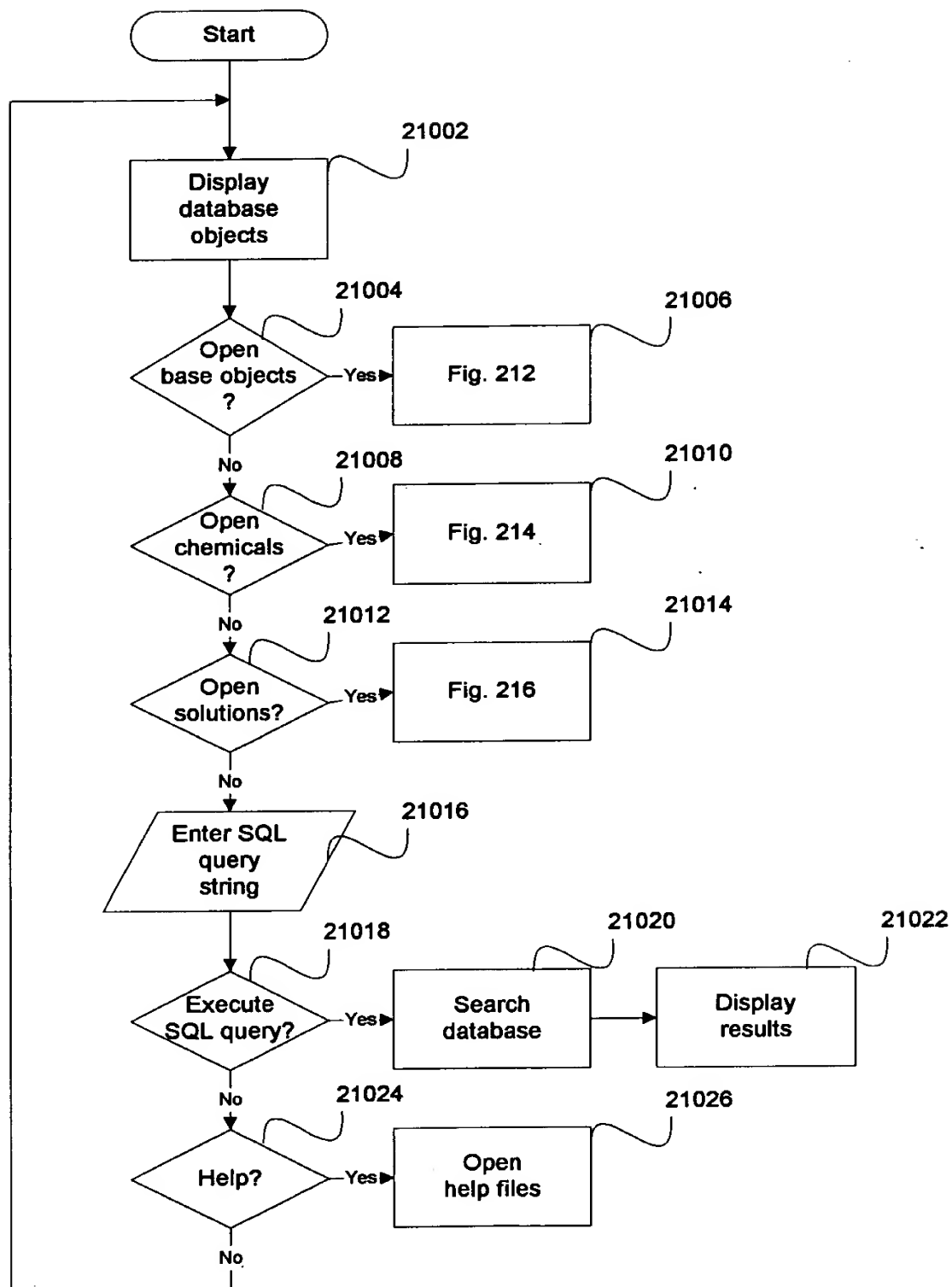


FIGURE 210



Database Object Manager

Crystal Monitor Objects:

- Base Objects
- Chemicals
  - Buffering Agent
  - pHConjugate
  - Precipitant
  - Salt
  - CSI
  - Chelator
  - Detergent
  - ReducingAgent
  - CryoCoolant
  - NucleationSuppressant
  - Organic
  - HeavyAtomCompound
  - Metal
  - Gas
  - Solvent
  - Other
- Solutions
- Data Mining

Attributes:

ChemicalName	ShortName	Formula	MolecularMass
dimethylarsinic ...	sodium cacodyl...	C2H6AsO2Na	160.
sodium citrate tri...	sodium citrate	C6H5Na3O7•2H...	294.1
ammonium sulfate	ammonium sulfate	(NH4)2SO4	132.1
ammonium sulfate	ammonium sulfate	(NH4)2SO4	132.1
ammonium sulfate	ammonium sulfate	(NH4)2SO4	132.1
lithium sulfate m...	lithium sulfate	Li2SO4•H2O	128.
ammonium phos...	dibasic ammoniu...	(NH4)2HPO4	132.1
sodium chloride	sodium chloride	NaCl	58.44
sodium phospho...	monobasic sodi...	NaH2PO4	120.
sodium phospho...	monobasic sodi...	NaH2PO4	120.
sodium phospho...	monobasic sodi...	NaH2PO4	119.96
potassium sodiu...	K/Na tartrate	C4H4O6NaK•4H...	282.2
sodium formate	sodium formate	CHO2Na	68.01
zinc acetate dihy...	zinc acetate	Zn(C2H3O2)2•2...	219.5
magnesium chlo...	magnesium chlo...	MgCl2•6H2O	203.3
calcium acetate	calcium acetate	Ca(C2H3O2)2	158.2
magnesium acet...	magnesium acet...	Mg(C2H3O2)2•4...	214.5

Execute SQL Query

26 rows. Query time: 411 ms

Help

Fig. 211

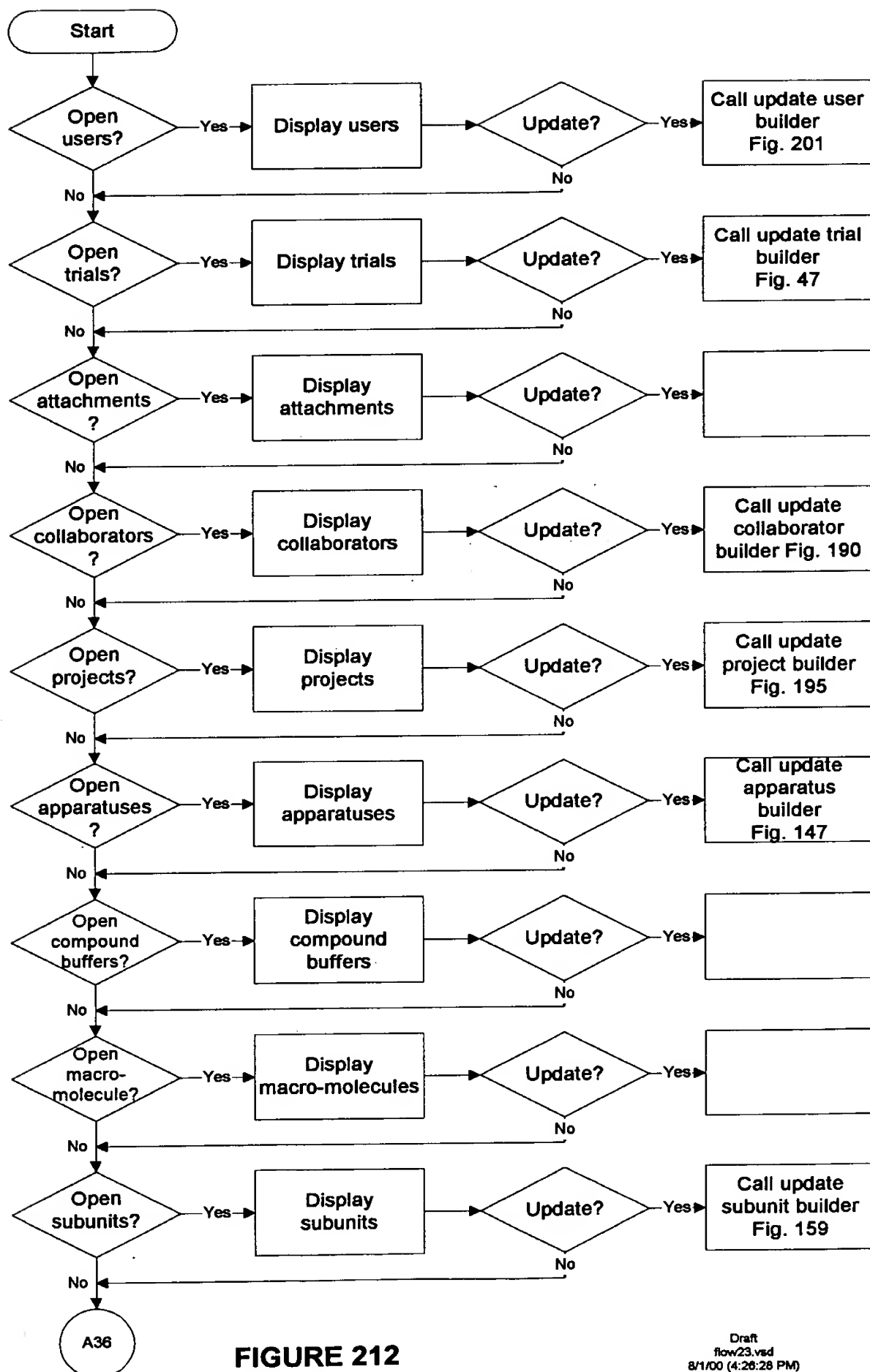


FIGURE 212

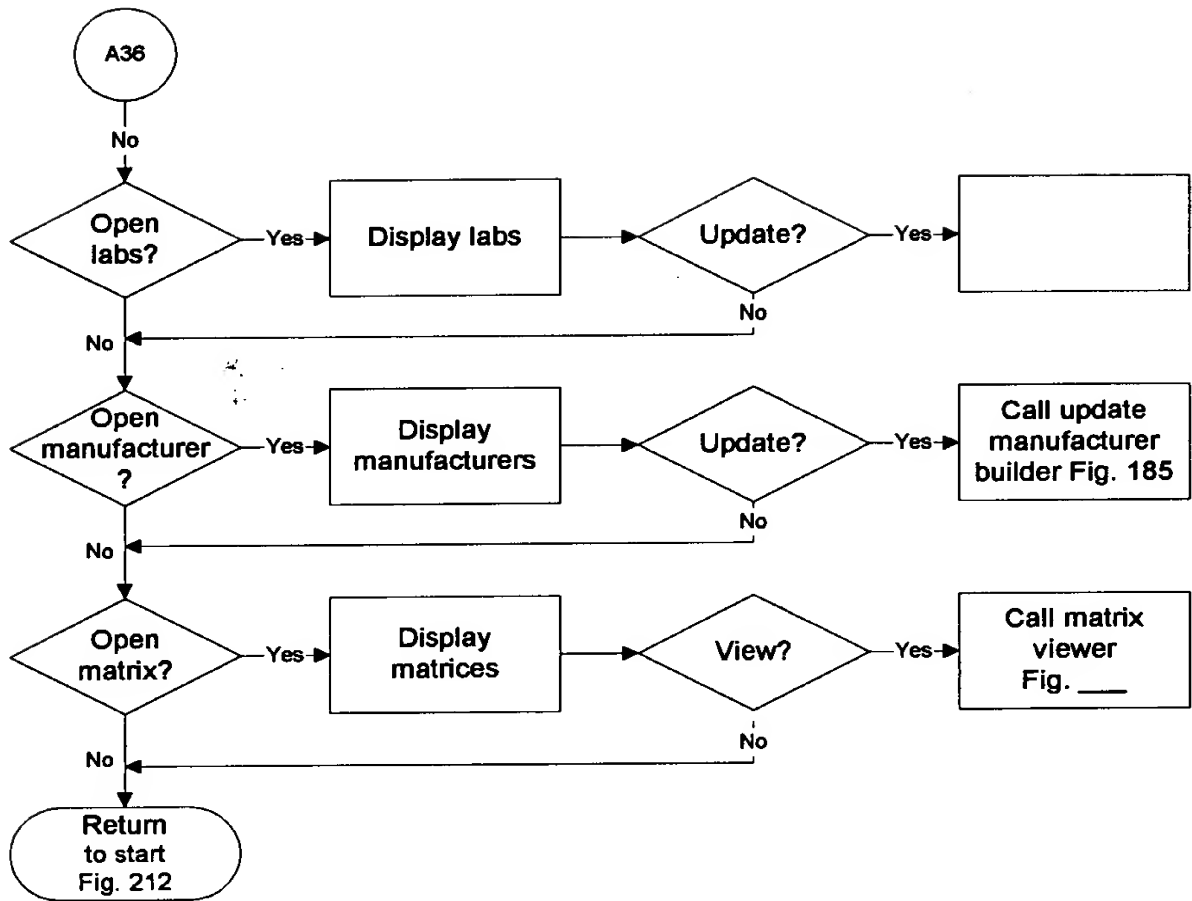


FIGURE 213

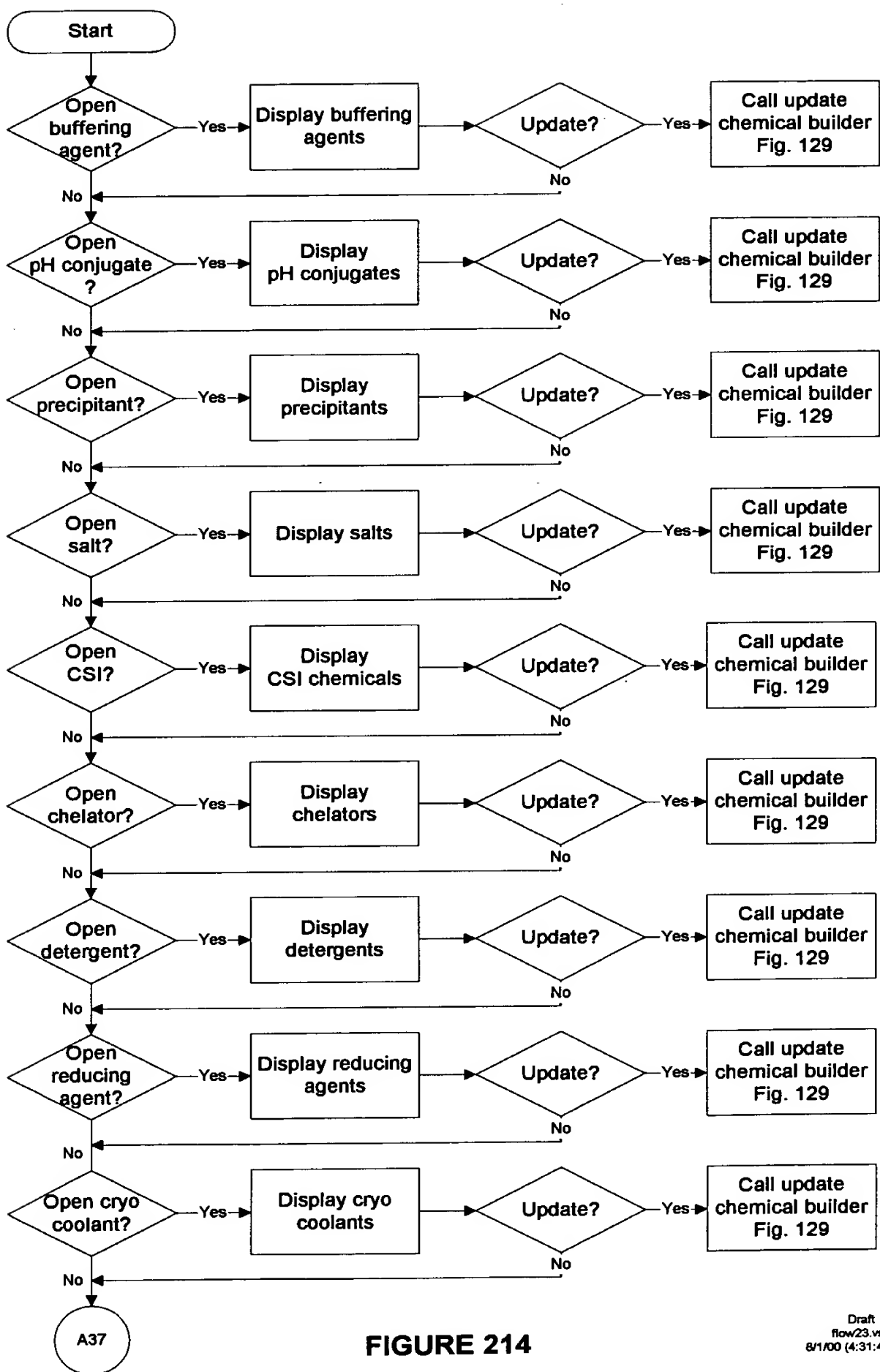


FIGURE 214

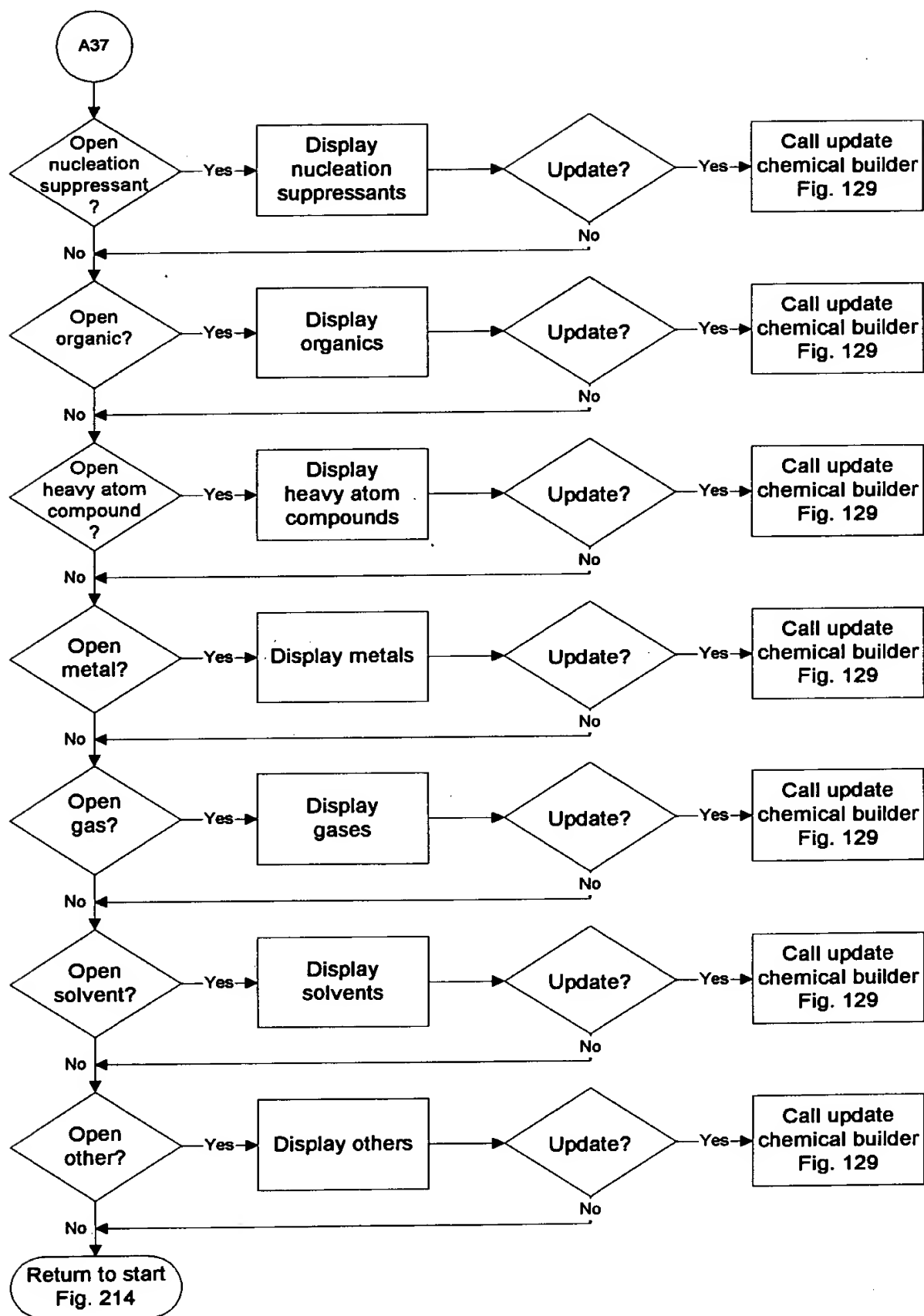


FIGURE 215



0022000-58T0950

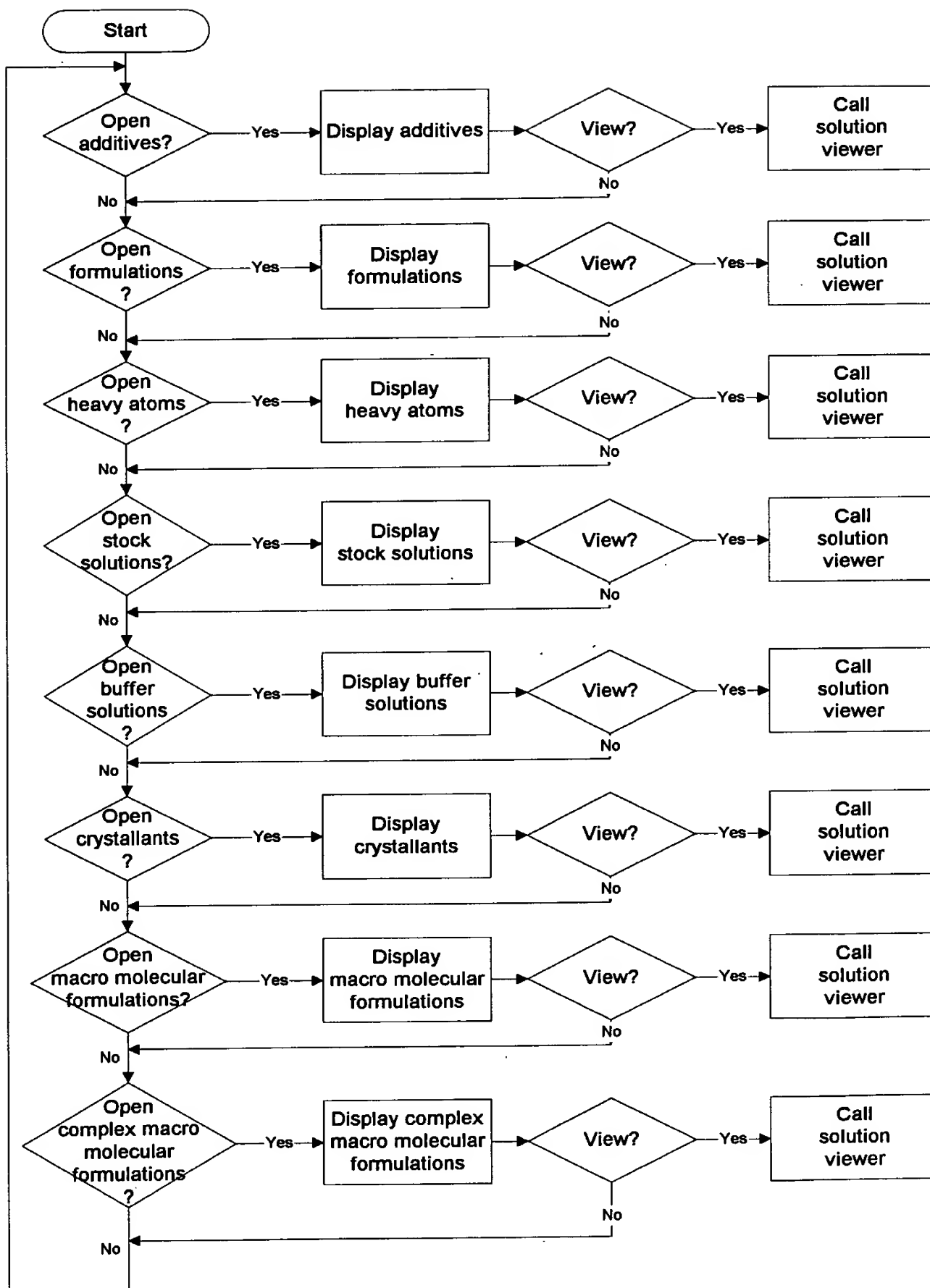


FIGURE 216

The screenshot shows the 'Crystal Monitor Objects' window. On the left is a tree view of chemical categories: Base Objects, Chemicals, Buffering Agent, pHConjugate, Precipitant, Salt, CSI, Chelator, Detergent, ReducingAgent, CryoCoolant, NucleationSuppressant, Organic, HeavyAtomCompound, Metal, Gas, Solvent, Other, and Solutions. The 'Chemicals' category is selected. On the right is a table with columns: Catalog, CAS, ChemicalName, ShortName, and Formula. The table lists 16 chemicals, all of which are potassium salts. At the bottom, there is a query editor with the text 'select \* from chemicals where chemicalname like "%potass%";' and a 'Help' button. The status bar at the bottom indicates '16 rows. Query time: 361 ms'.

Catalog	CAS	ChemicalName	ShortName	Formula
20,781-0	151-50-8	potassium cyani...	KCN	K
78-1970	10025-99-7	potassium tetra...	K2PtCl4	K
F1502	103213-47-4	D-fructose 6-ph...	K2 D-fructose 6...	K
H7273	21799-87-1	hydroquinonesu...	K HQSA	C
HR2-539	6381-59-5	potassium/sodi...	K/Na tartrate	K
HR2-553	7778-77-0	potassium dihyd...	K H2 phosphate	K
HR2-635	7758-11-4	di-potassium hy...	K2 H phosphate	K
P0165	6381-59-5	potassium sodiu...	K/Na tartrate	C
P0662	7778-77-0	potassium phos...	K H2 phosphate	K
P2569	7789-23-3	potassium fluoride	KF	K
P2713	333-20-0	potassium thioc...	KSCN	K
P3786	7758-11-4	potassium phos...	K2 H phosphate	K
P5708	127-08-2	potassium acetate	KAc	K
P9333	7447-40-7	potassium chlori...	KCl	K
P9458	7778-80-5	potassium sulfate	K2 sulfate	K
T6897	921-53-9	potassium tartrate	K2 tartrate	K

select \* from chemicals where chemicalname like "%potass%";

16 rows. Query time: 361 ms

21700

Fig. 217

002080" 59T2960

Database Object Manager

Crystal Monitor Objects:

- Base Objects
- Chemicals
  - Buffering Agent
  - pHConjugate
  - Precipitant
  - Salt
  - CSI
  - Chelator
  - Detergent
  - ReducingAgent
  - CryoCoolant
  - NucleationSuppressant
  - Organic
  - HeavyAtomCompound
  - Metal
  - Gas
  - Solvent
  - Other
- Solutions

Attributes:

Catalog	CAS	ChemicalName	ShortName
A7330	631-61-8	ammonium acet...	NH4 Ac
HR2-565	631-61-8	ammonium acet...	NH4 Ac
A6141	1066-33-7	ammonium bicar...	NH4 bicarbonate
A5666	12125-02-9	ammonium chlori...	NH4 chloride
HR2-555	7722-76-1	ammonium dihyd...	NH4 H2 phosph...
F2004	540-69-2	ammonium form...	NH3 formate
A7455	6484-52-2	ammonium nitrate	NH4 nitrate
A1167	7783-28-0	ammonium phos...	(NH4)2 H phosph...
A2939	7783-20-2	ammonium sulfate	(NH4)2 sulfate
A938-500	7783-20-2	ammonium sulfate	(NH4)2 sulfate
HR2-541	7783-20-2	ammonium sulfate	(NH4)2 sulfate
JT0792-5	7783-20-2	ammonium sulfate	(NH4)2 sulfate
B6394	10326-27-9	barium chloride ...	Ba chloride
C4705	62-54-4	calcium acetate	CaAc2
HR2-567	62-54-4	calcium acetate	CaAc2
C5080	10035-04-8	calcium chloride...	CaCl2

Execute SQL Query

Help...

77 rows. Query time: 81 ms

21800

Fig. 218

002080"587E960

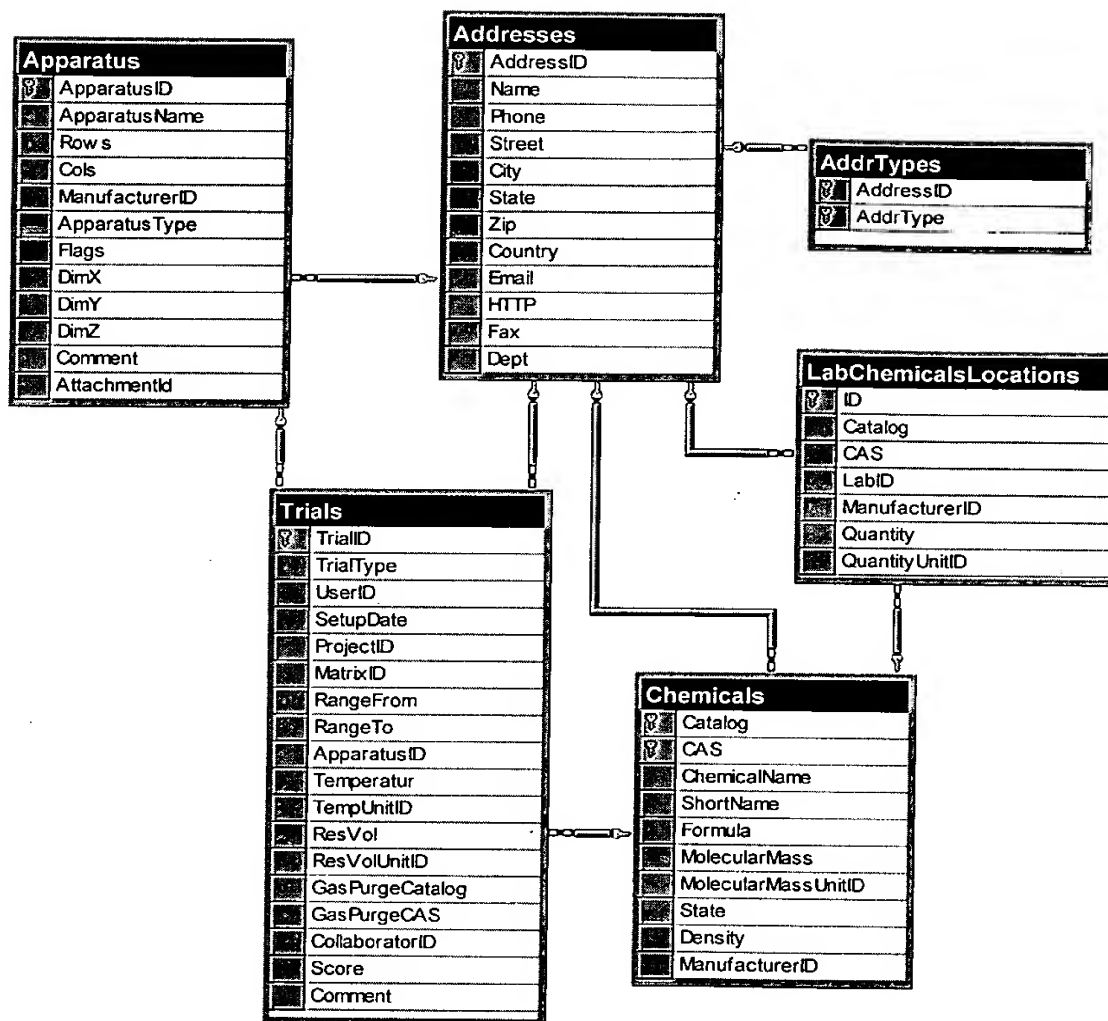
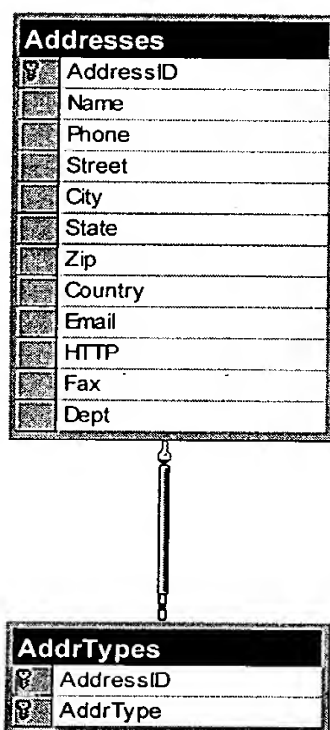


Fig. 219

002080" 58T E960



**Fig. 220**

002080 SS TE 960

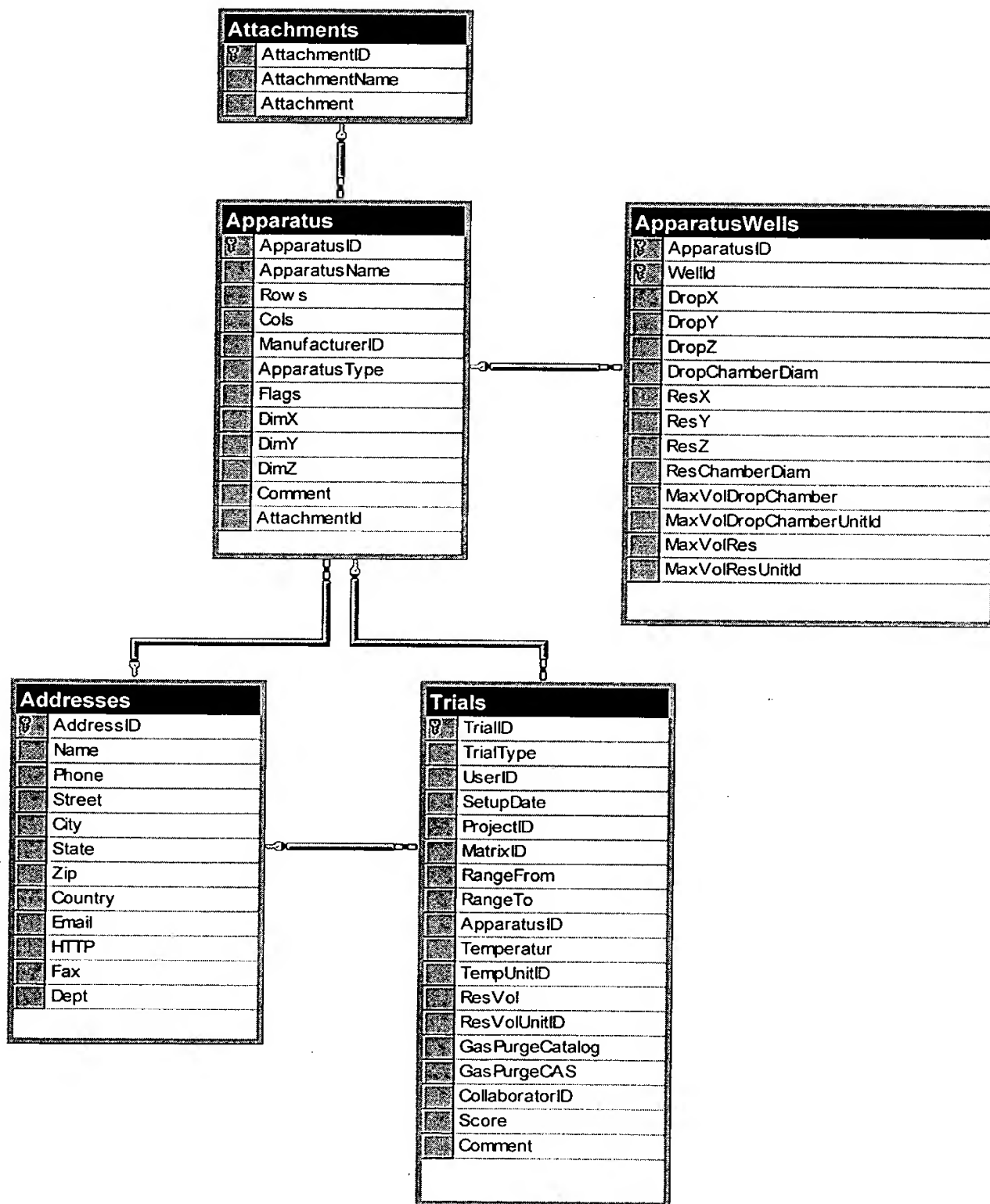
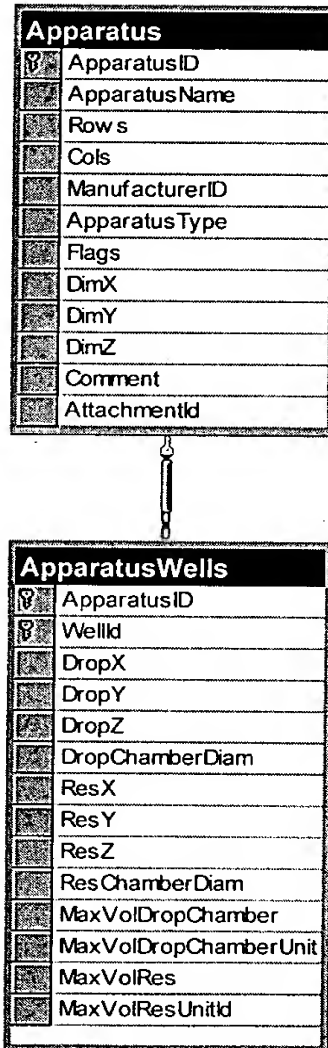


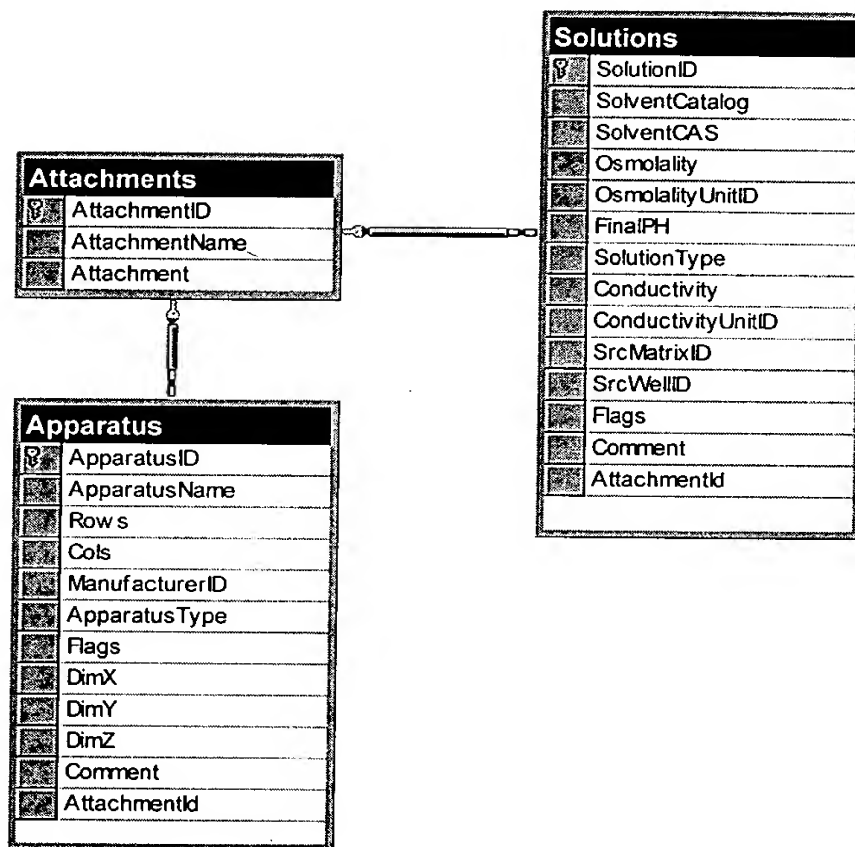
Fig. 221

002080"58TFE950



**Fig. 222**

002080" 587E960



**Fig. 223**  
1-1



0963185.00000

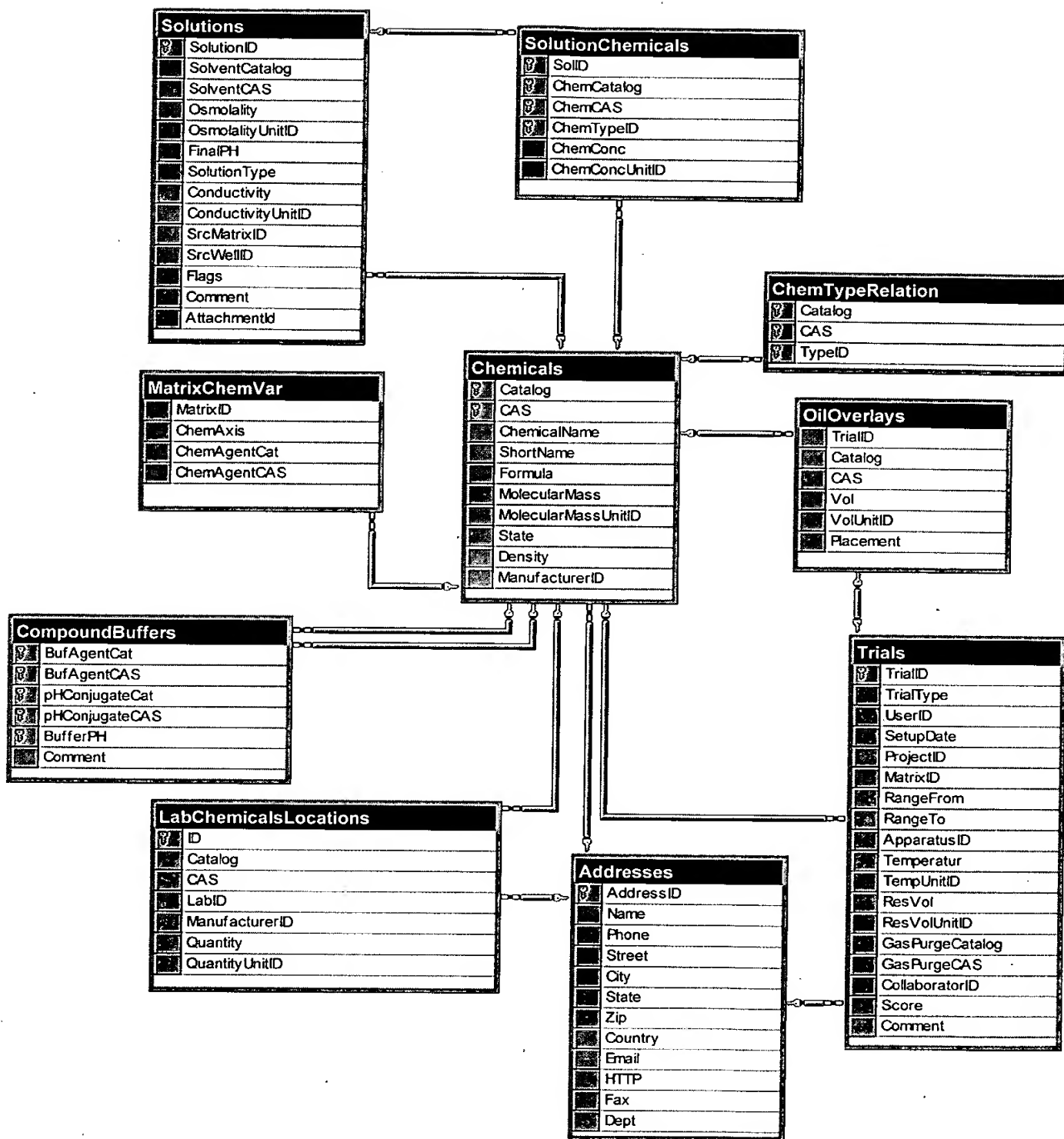


Fig. 224

002080 " 58T E960

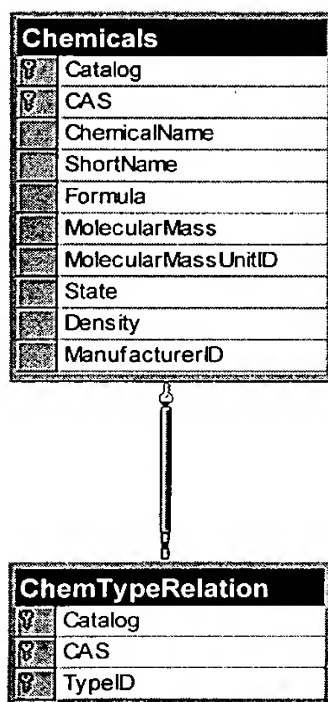


Fig. 225

0063135 090200

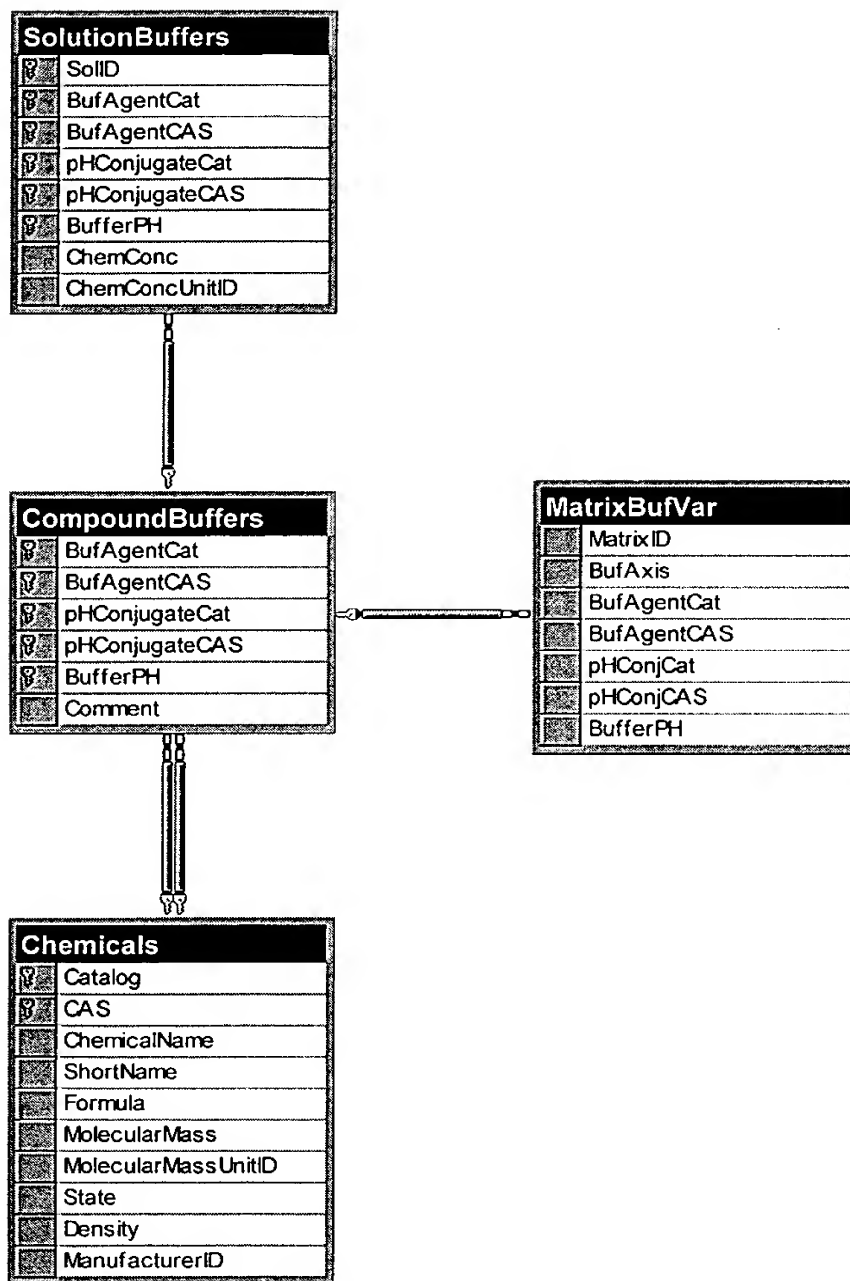


Fig. 226

002080" 55T 960

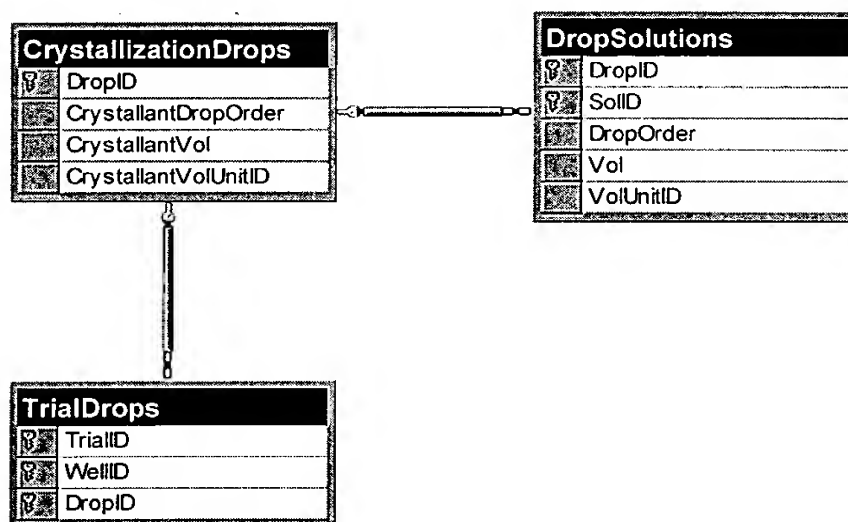


Fig. 227

09631185, 080200

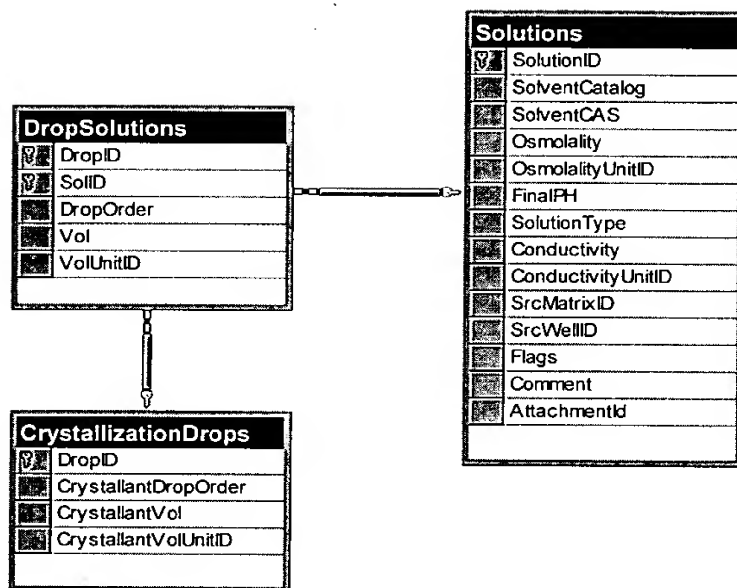


Fig. 228

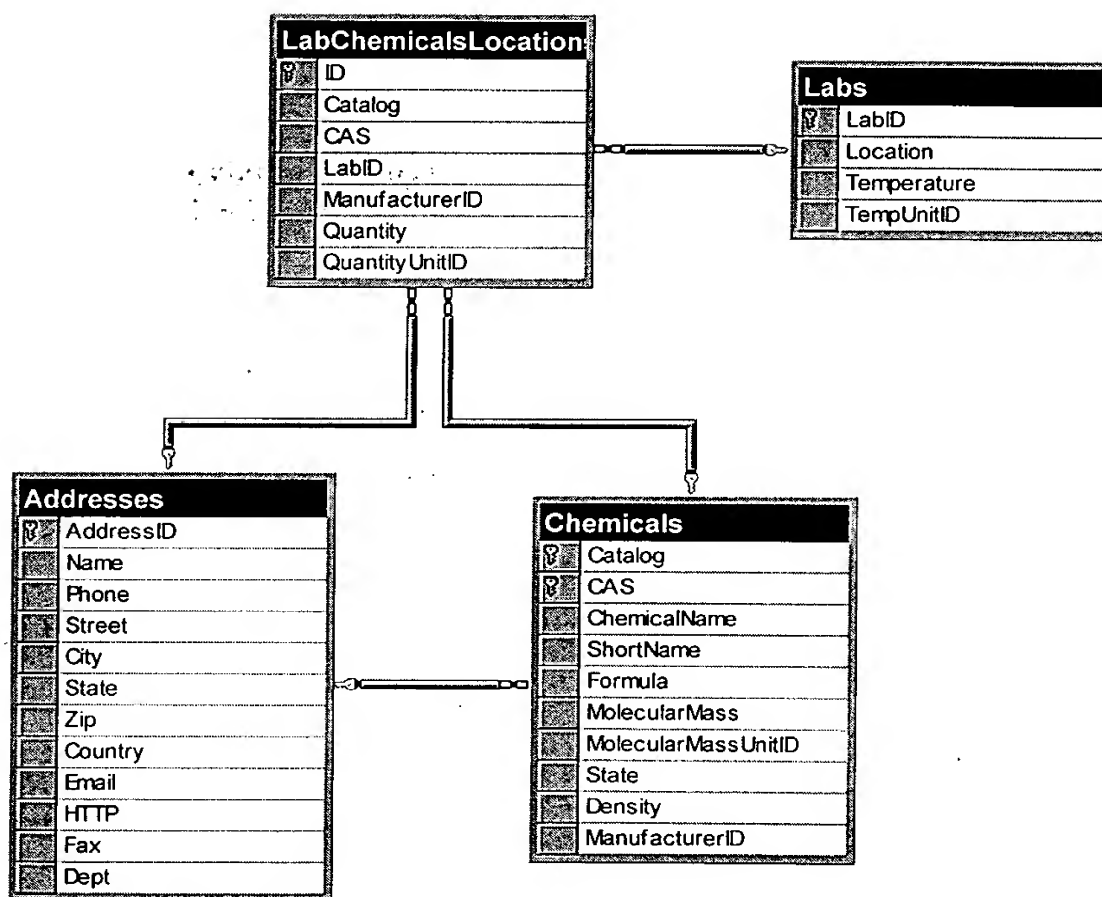
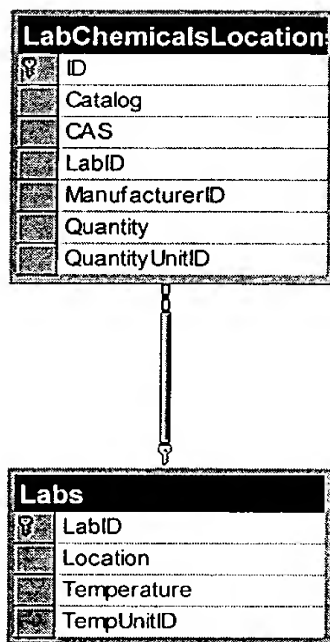
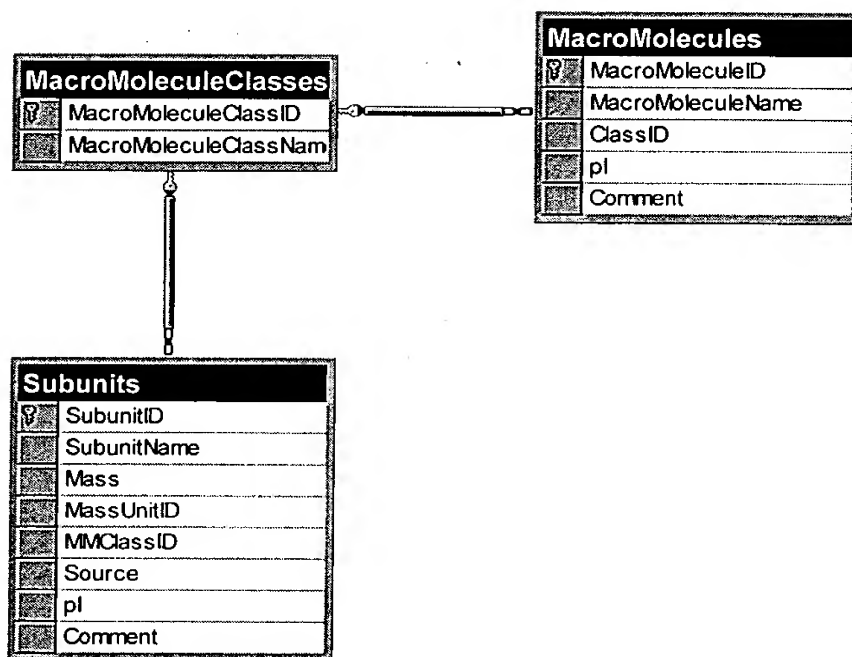


Fig. 229

002080" 53TE960



**Fig. 230**



**Fig. 231**



002080" 59TTE960

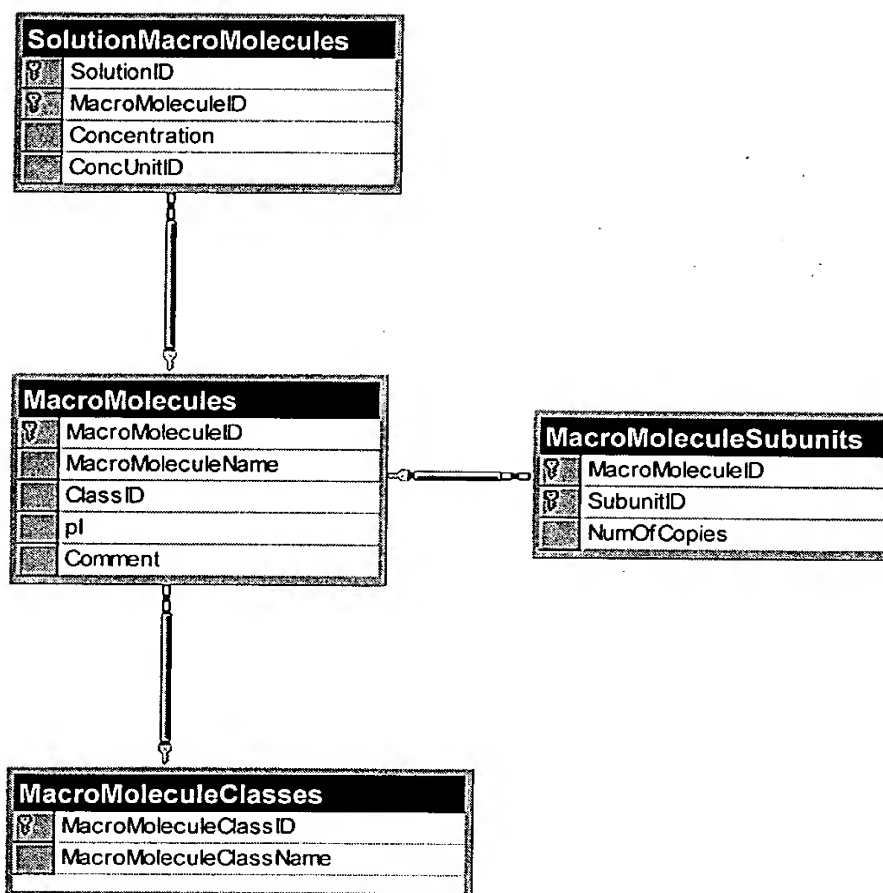


Fig. 232

002080"587E960

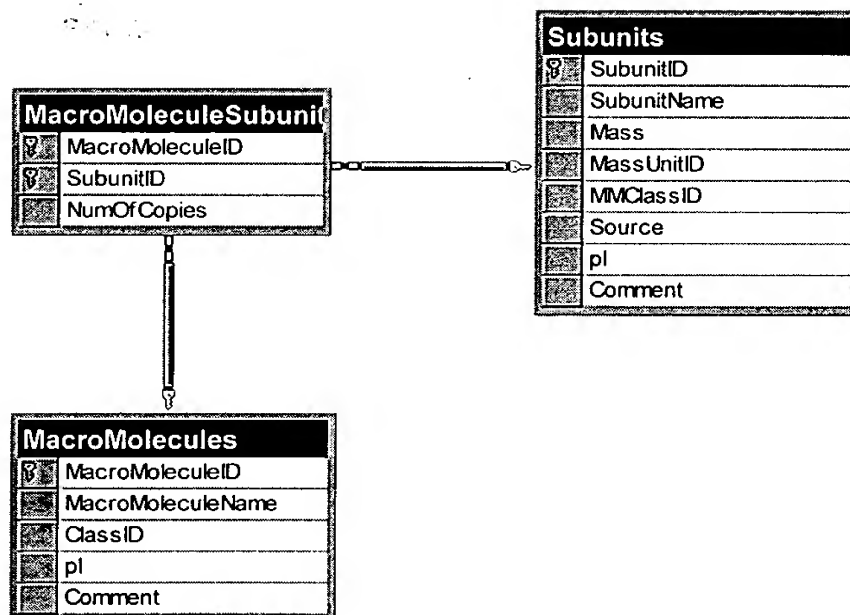


Fig. 233

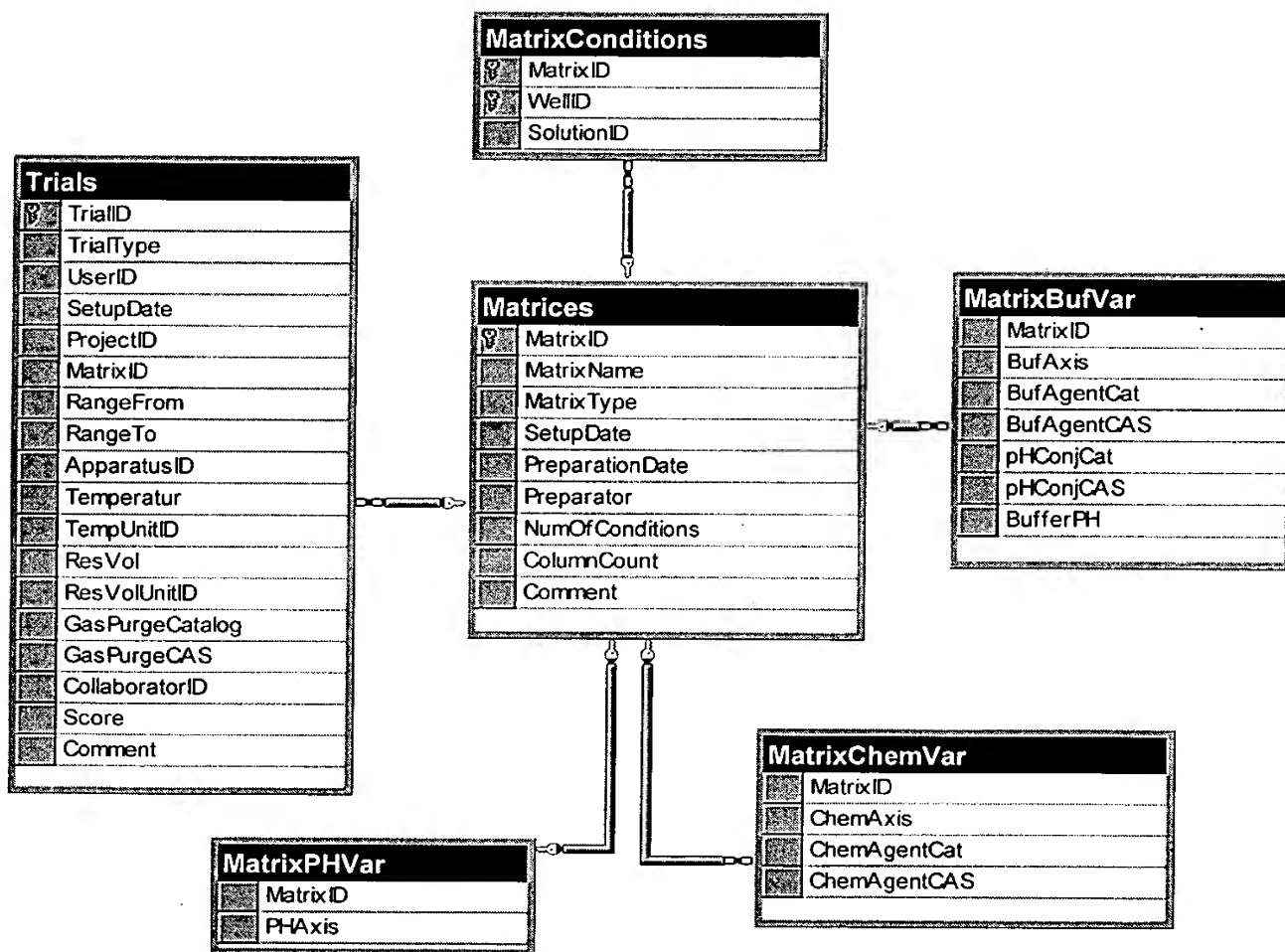
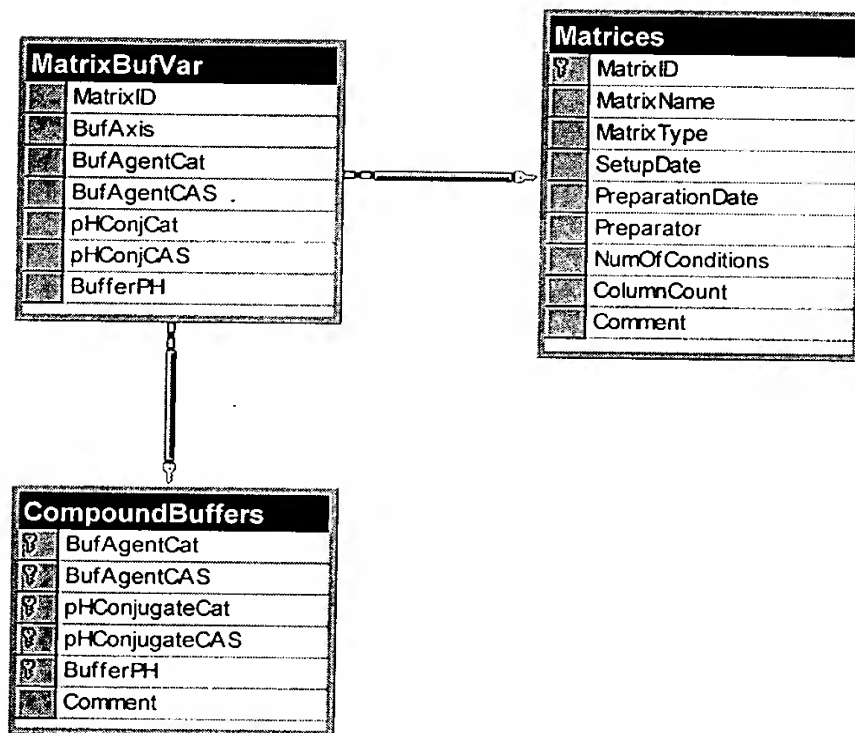


Fig. 234

**Fig. 235**

002090" 597E60

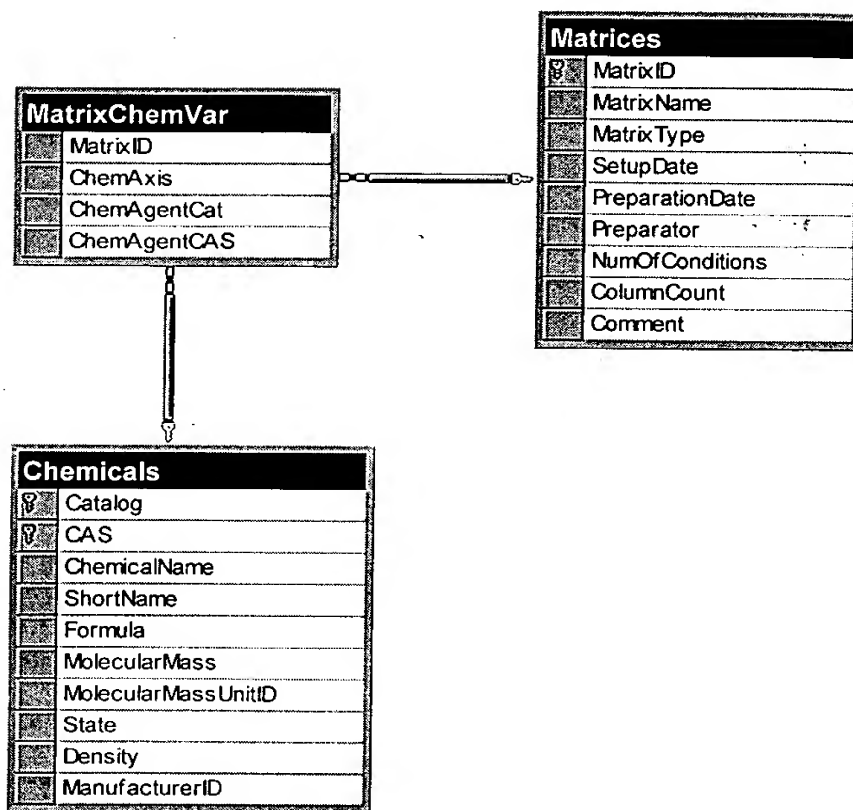


Fig. 236

002080 "587TE960

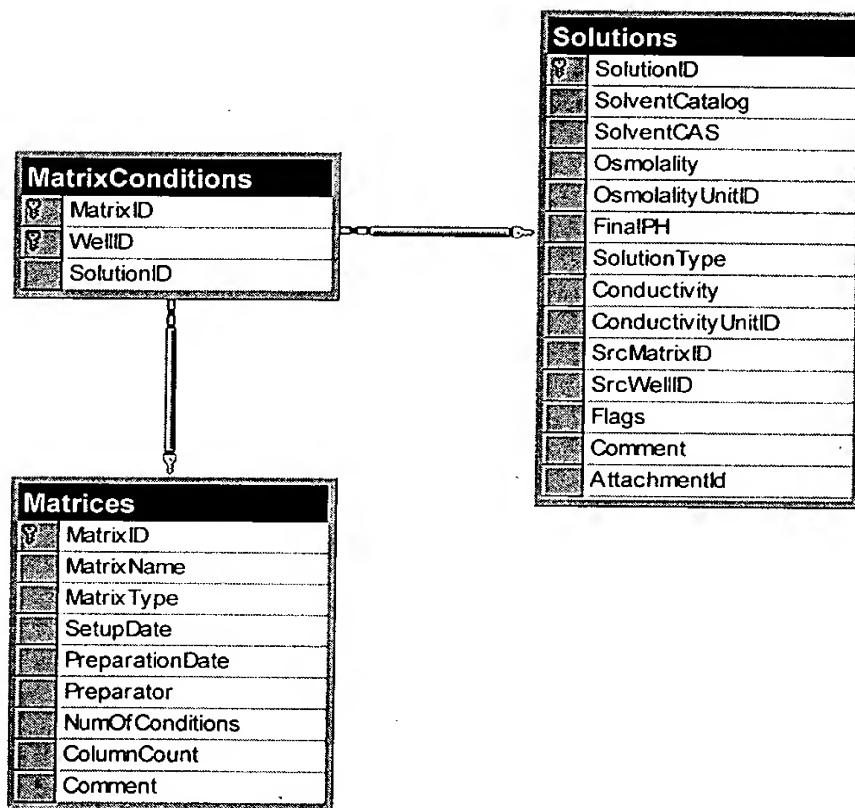
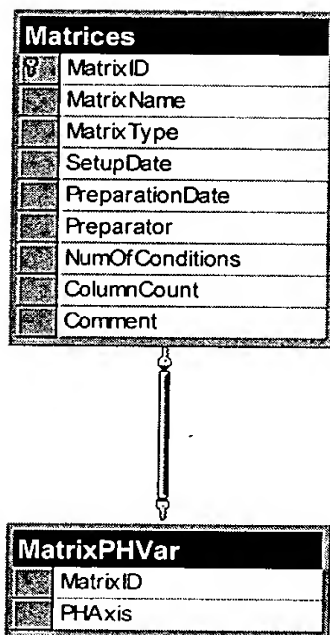


Fig. 237



**Fig. 238**

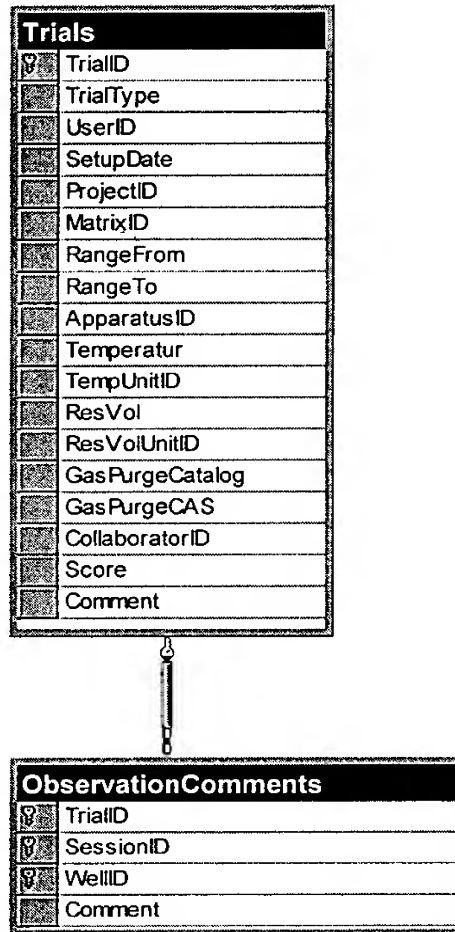
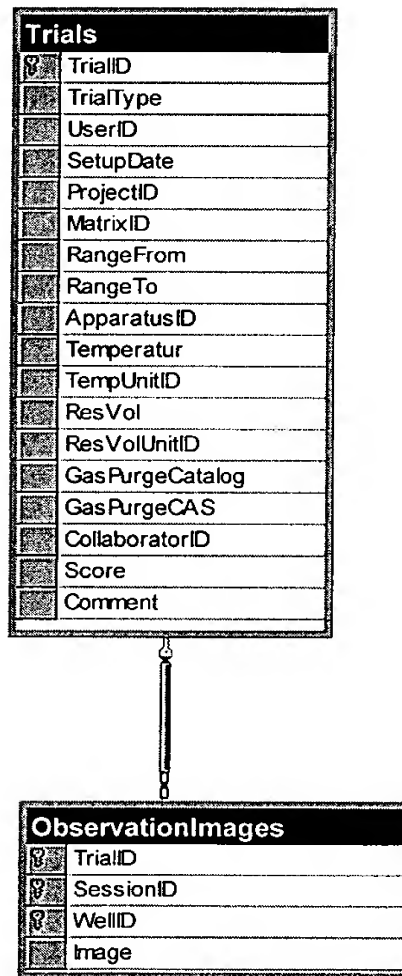


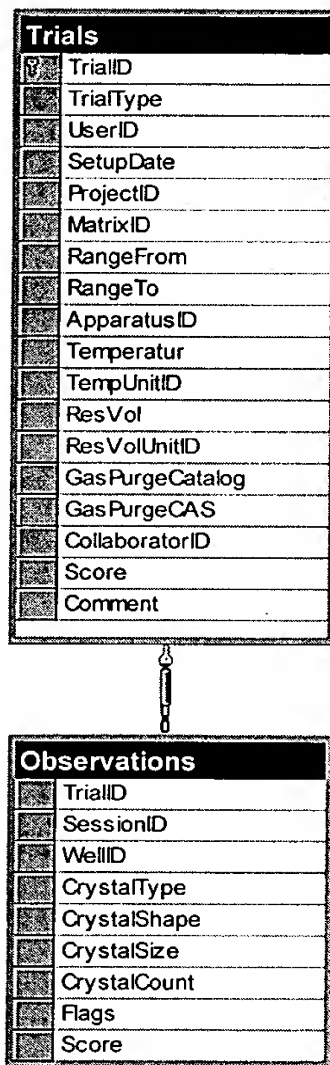
Fig. 239



002020" SSTFE60



**Fig. 240**

**Fig. 241**

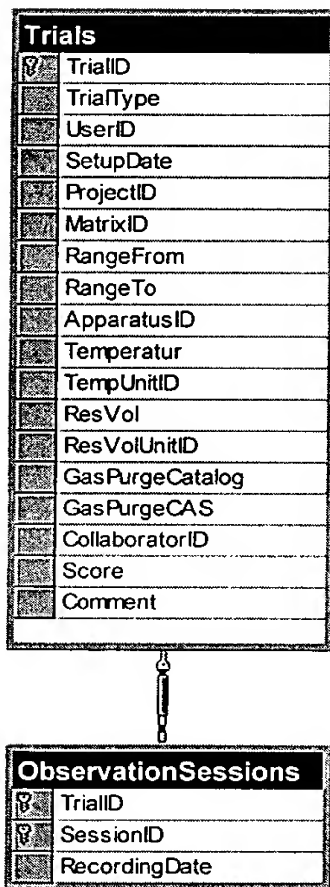
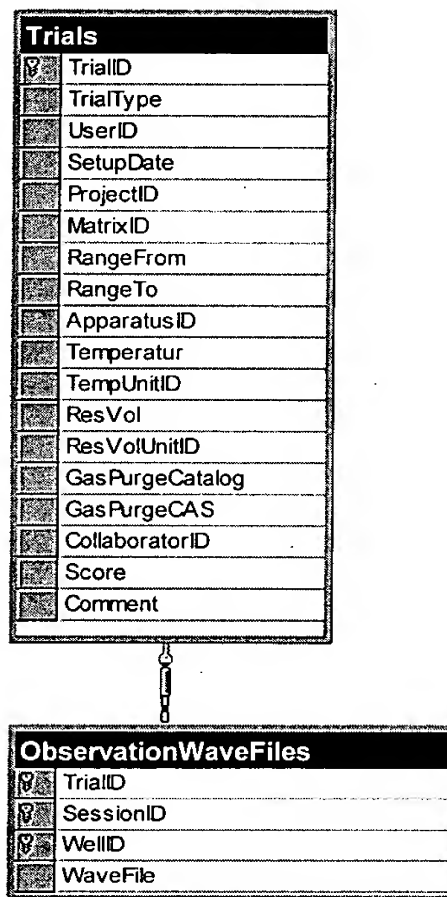


Fig. 242

002080"55T960



**Fig. 243**

002080" 581185 080200

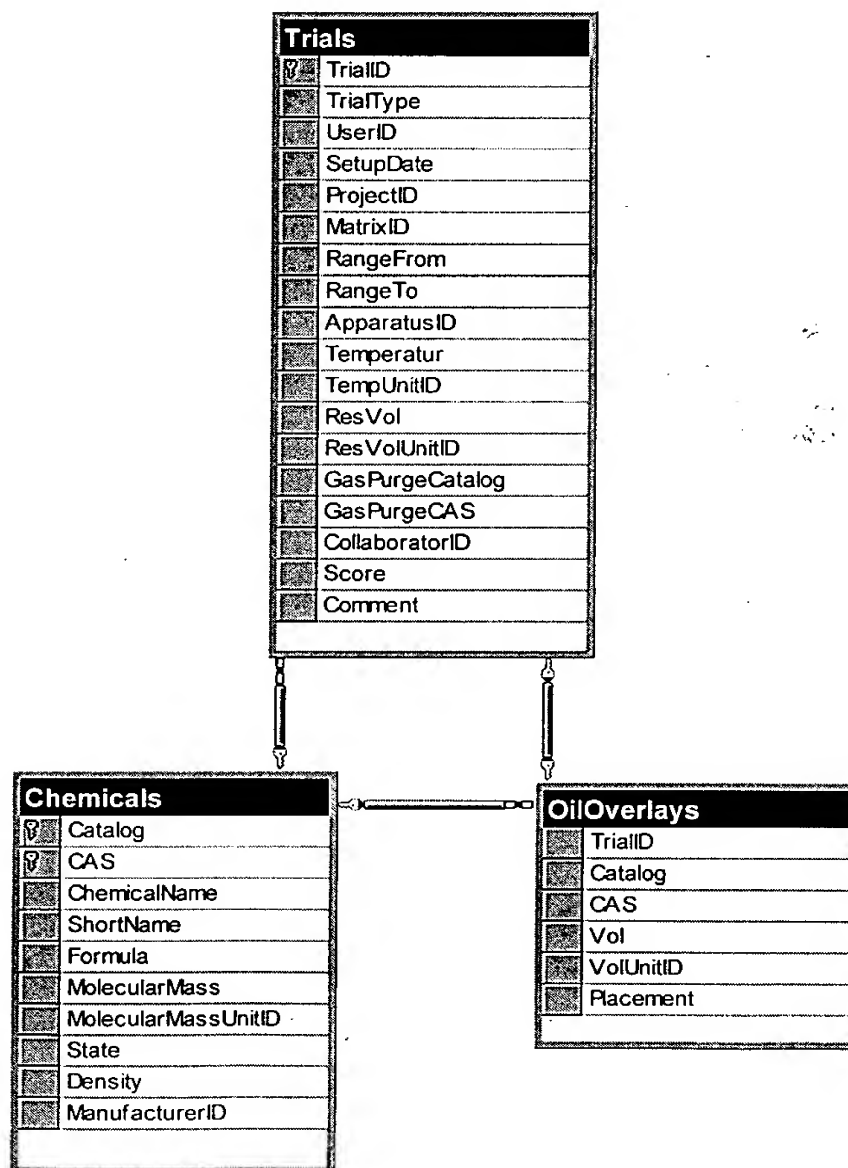




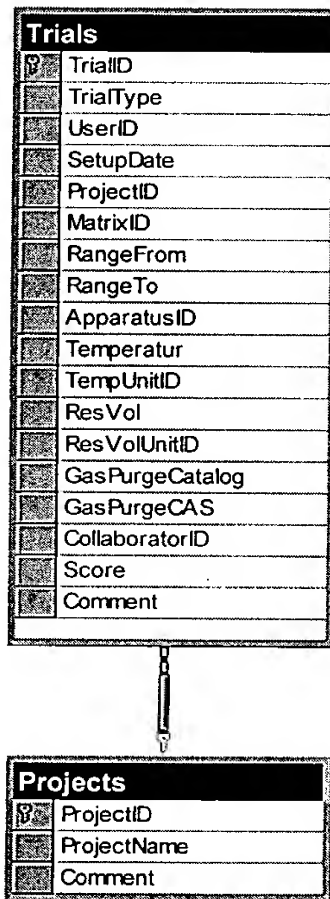
Fig. 244

002030" SET E 960

Preparators	
	PreparatorID
	PreparatorName

**Fig. 245**

002080"55T'E960



**Fig. 246**

002080"587650

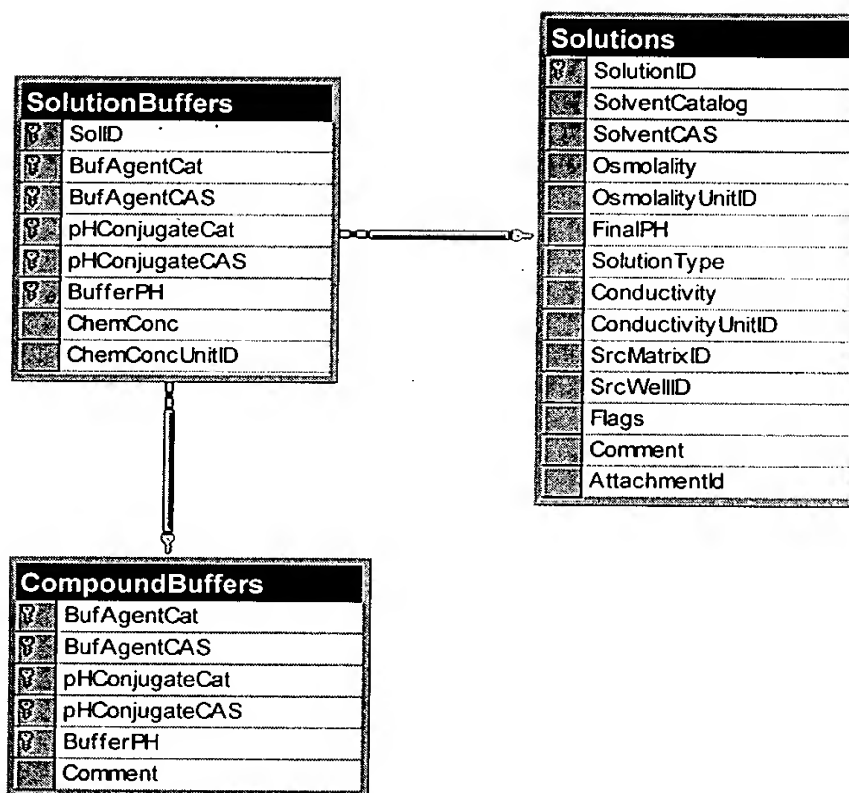


Fig. 247



002080"58T8960

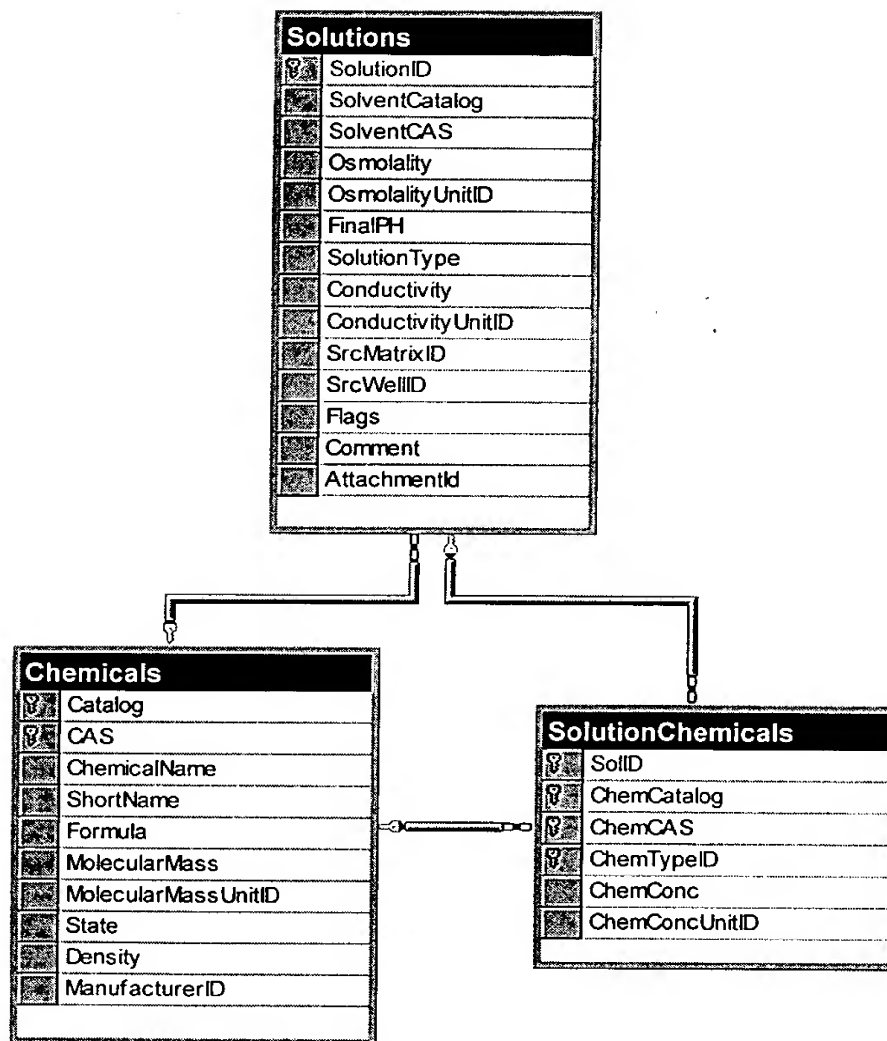
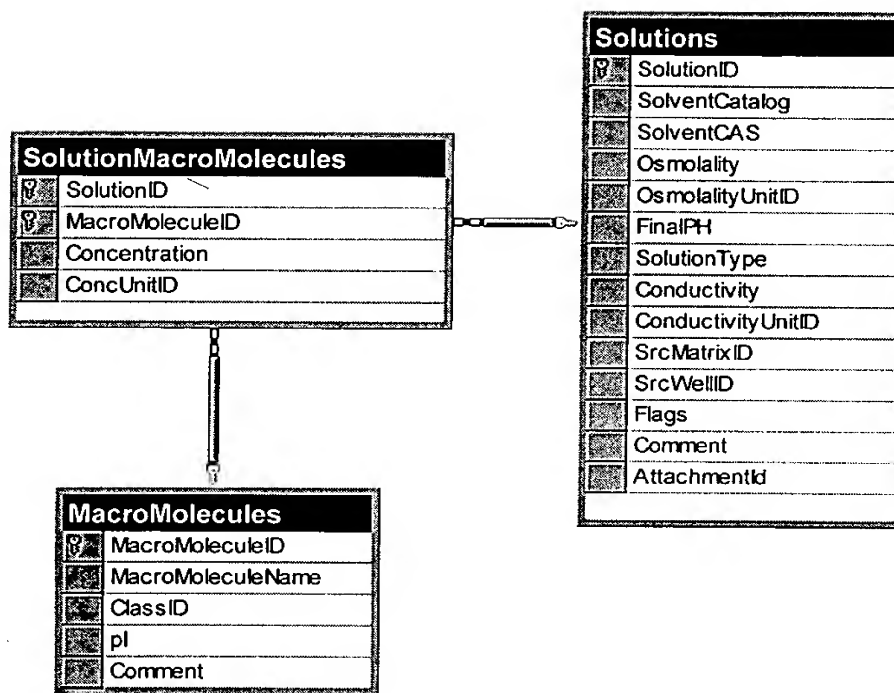


Fig. 248  
1-1

002080" 537E960



**Fig. 249**

002080"59T960

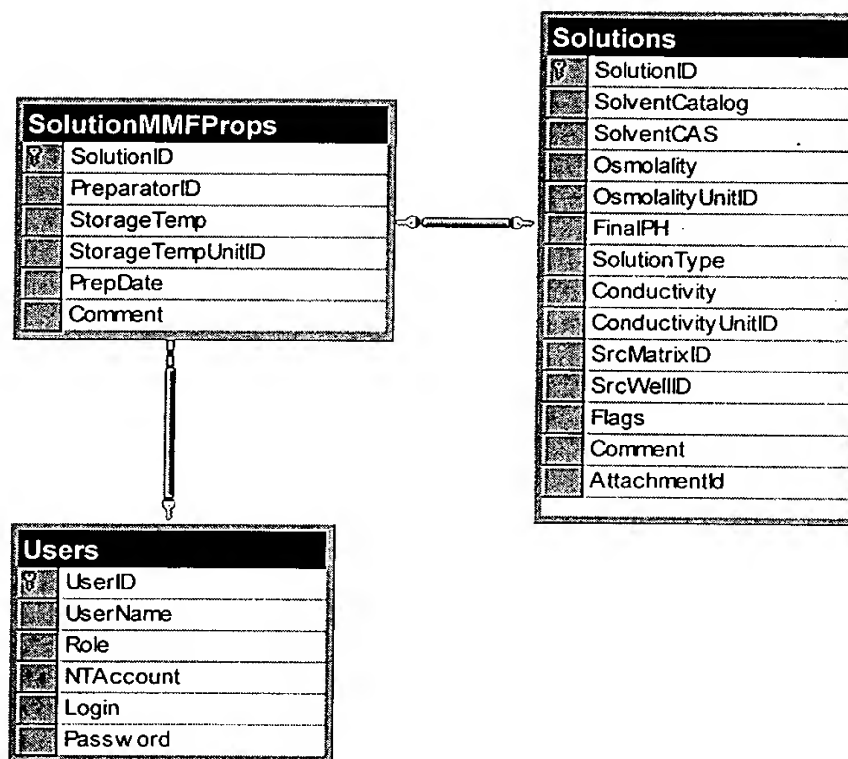
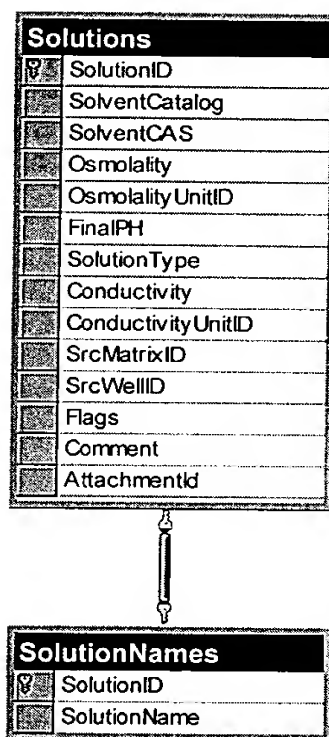


Fig. 250

002080"587E960



**Fig. 251**

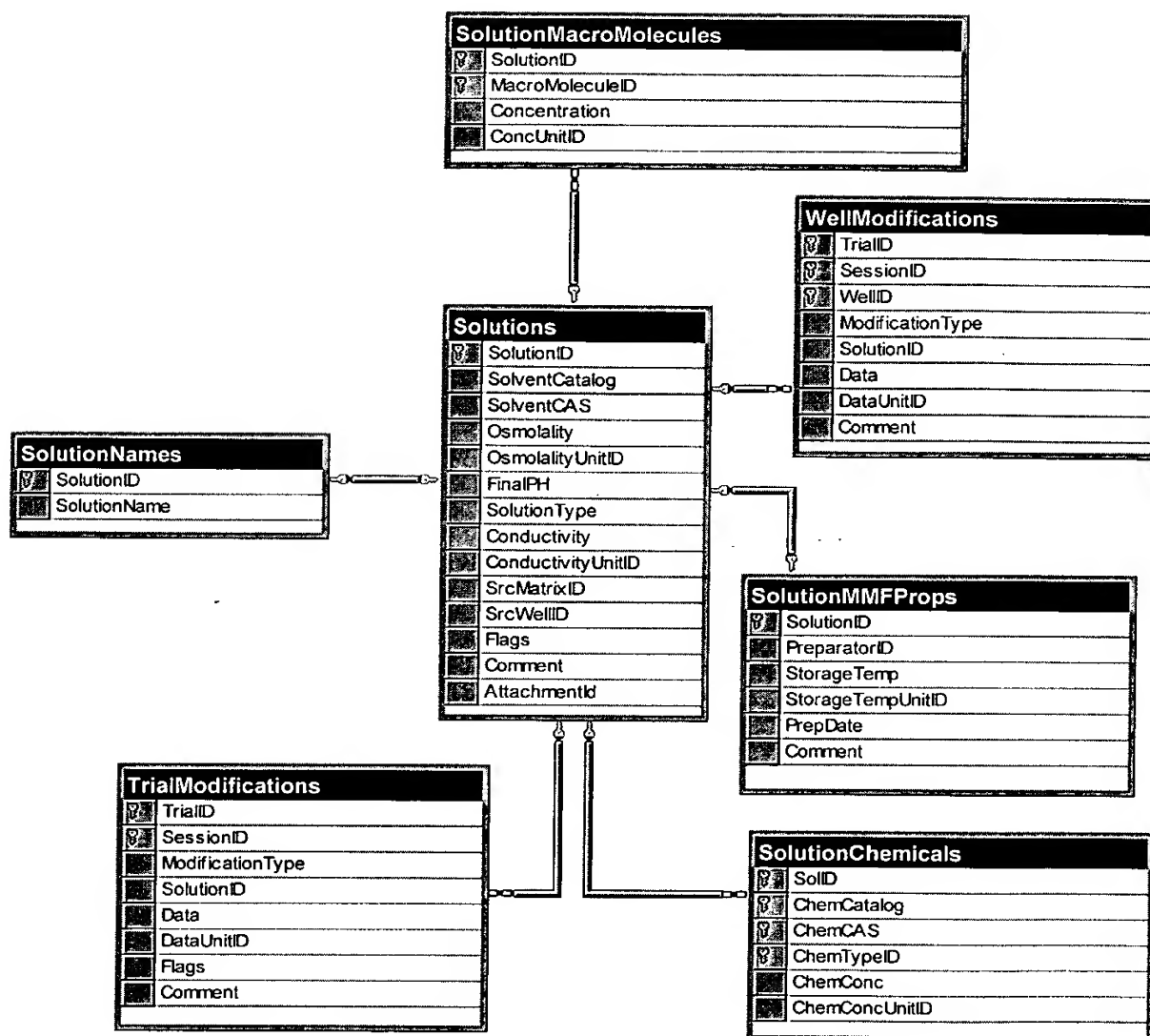


Fig. 252

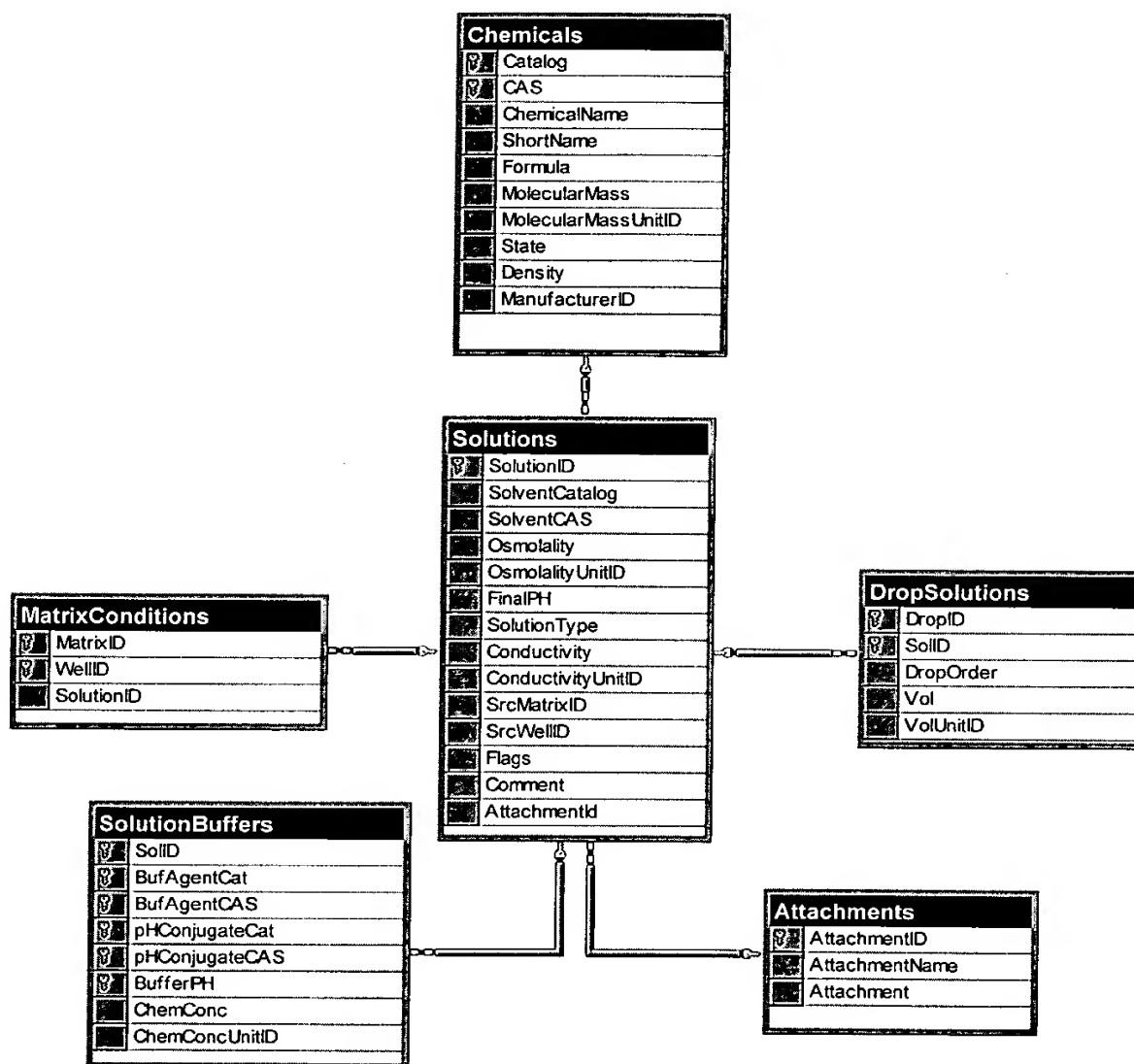
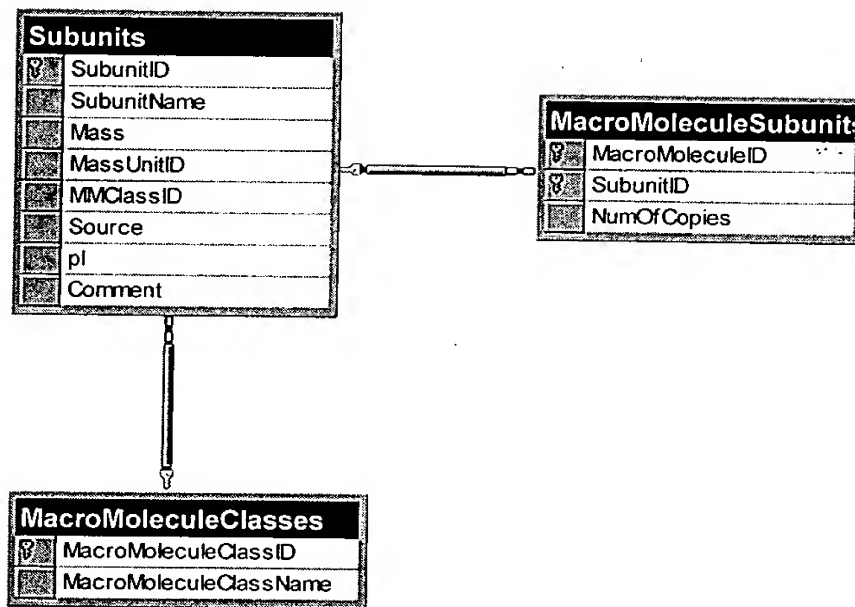


Fig. 253

002080" SBT E 960



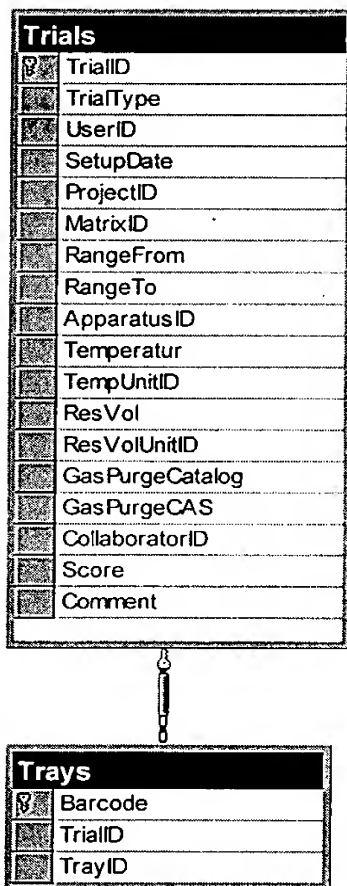
**Fig. 254**

SystemInfo	
Attrib	
Value	

**Fig. 255**



09631185-030200



**Fig. 256**

002090" 58TTE960

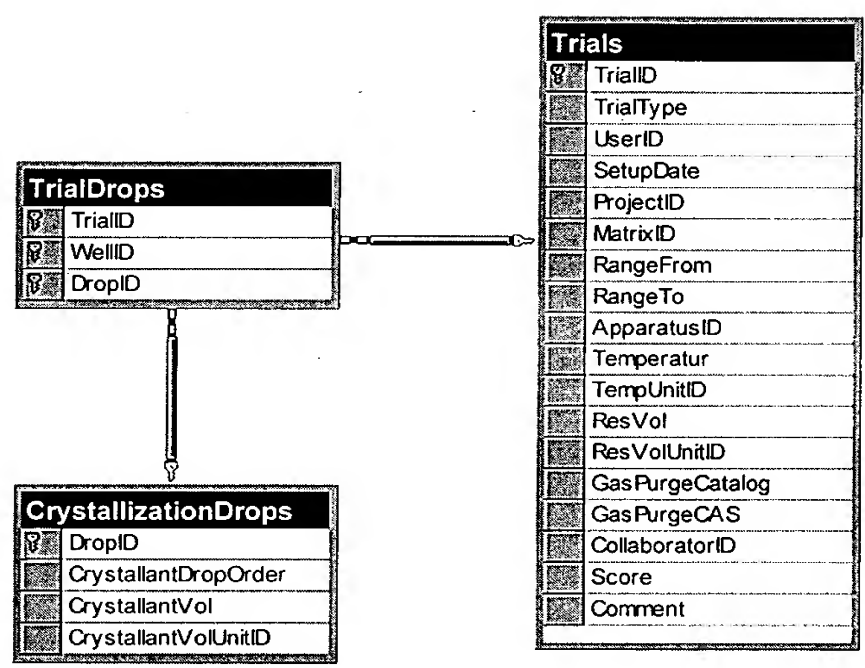


Fig. 257  
1-1

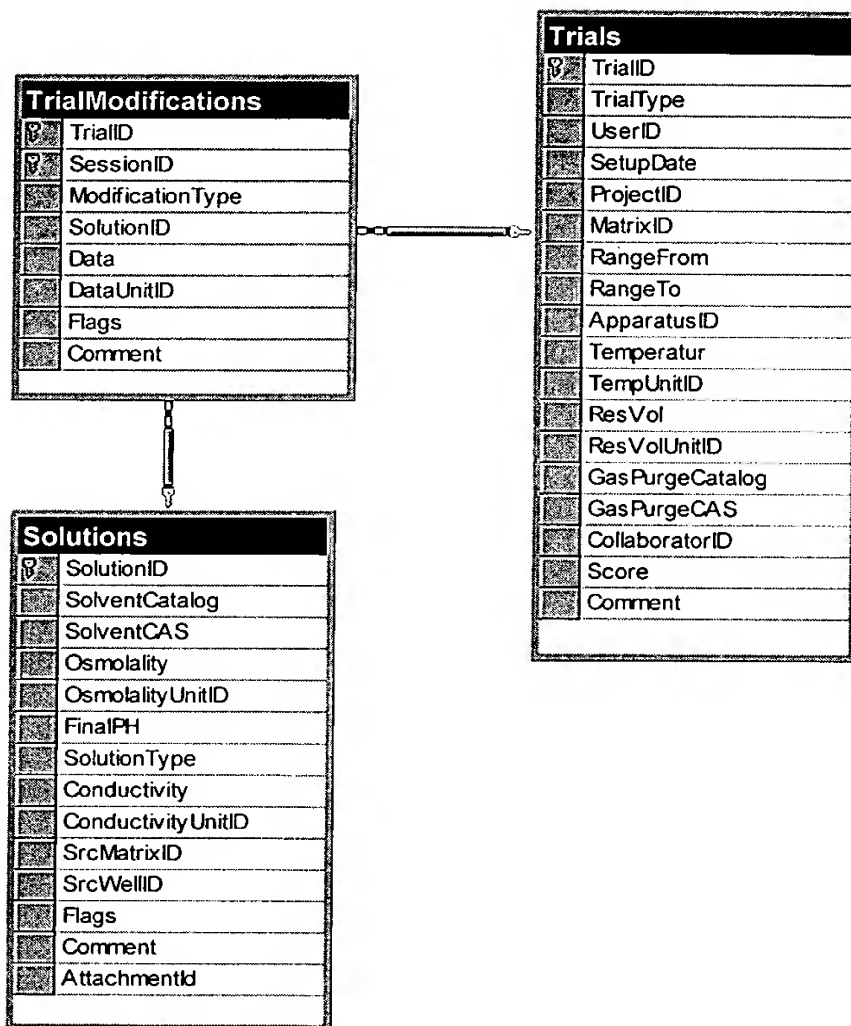


Fig. 258

0963135 030200

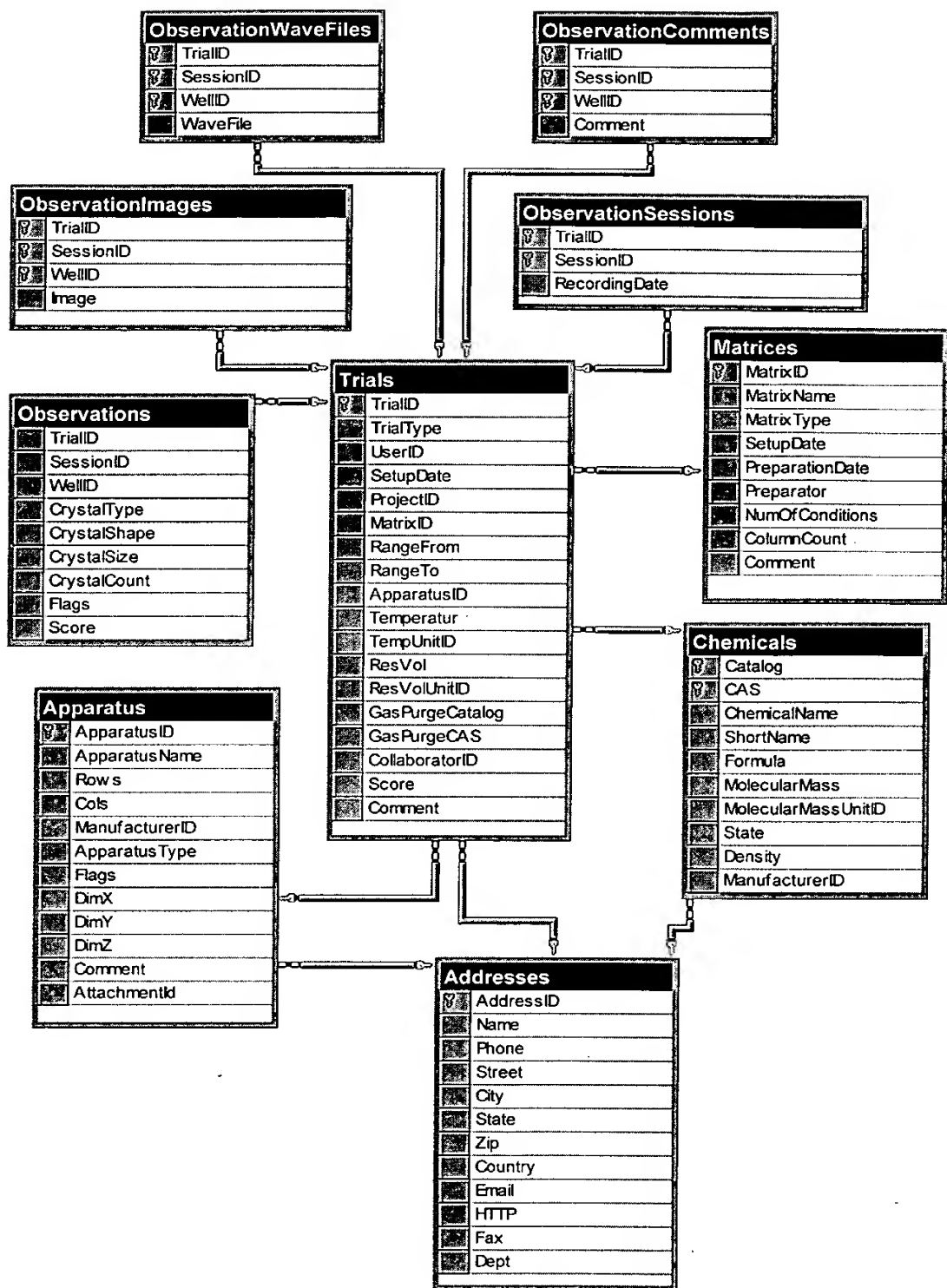


Fig. 259

002080 "SSTED960

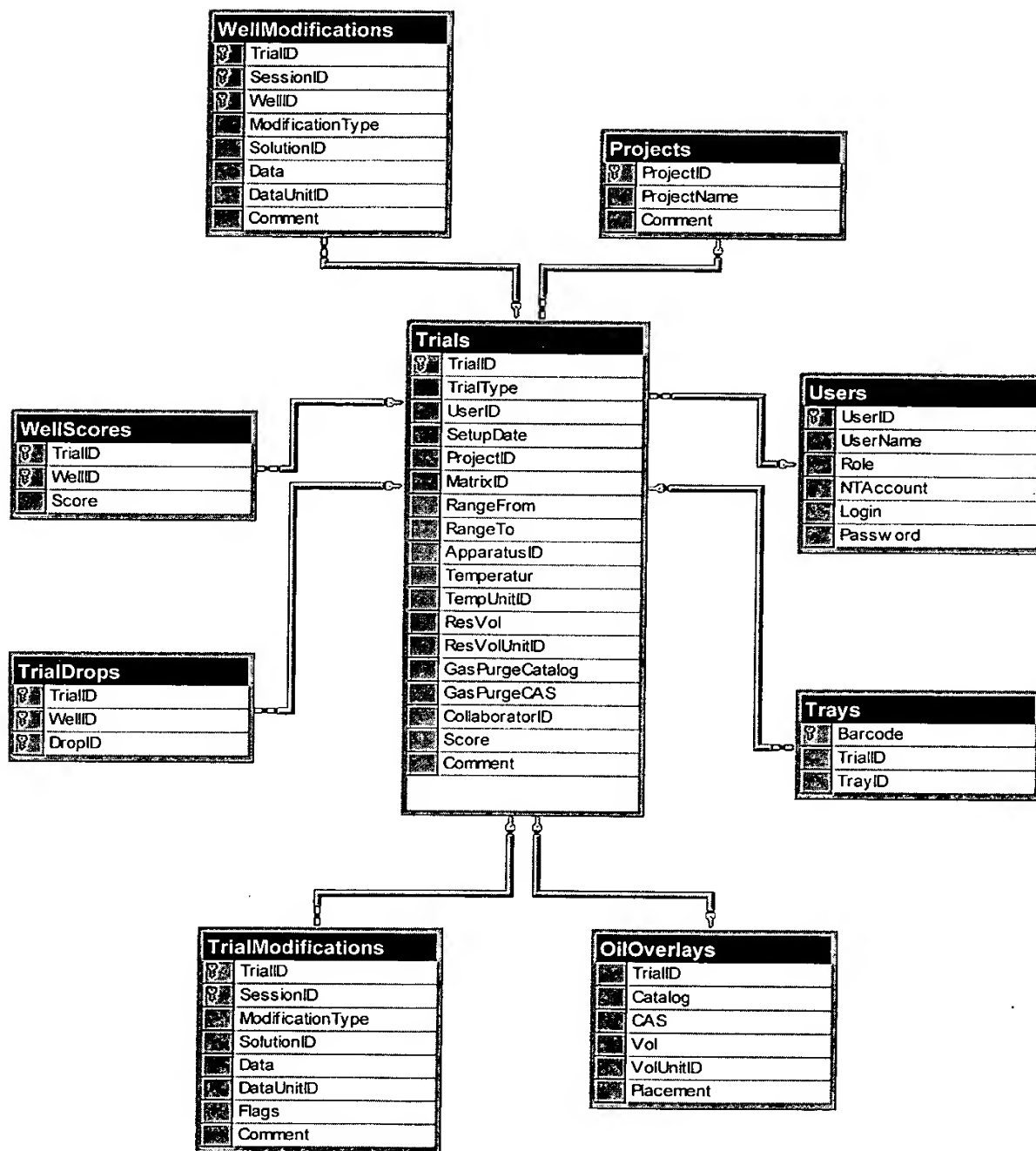
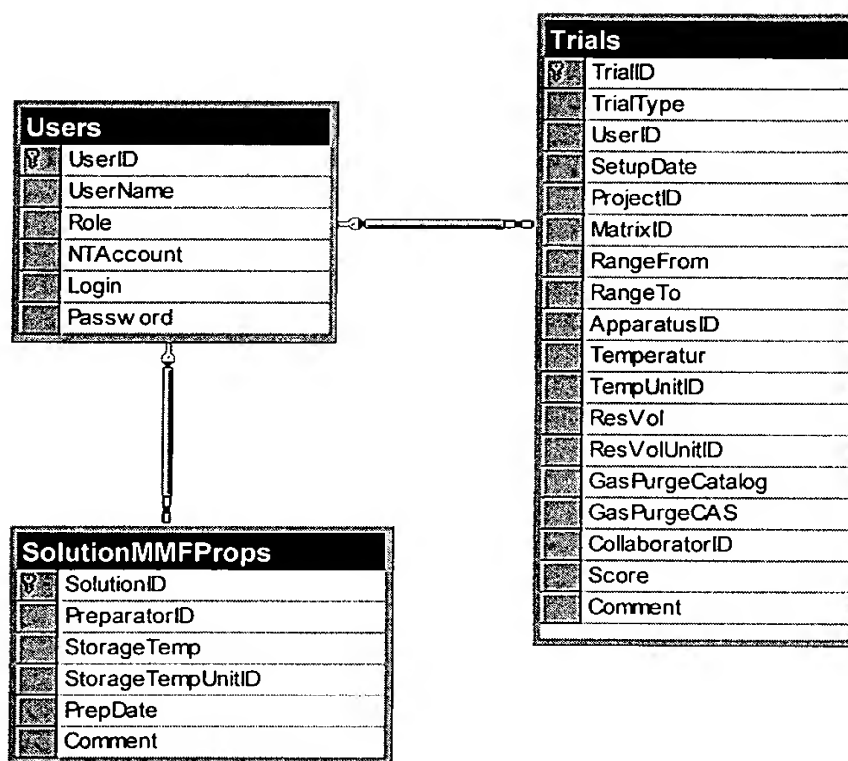


Fig. 260

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**Fig. 261**

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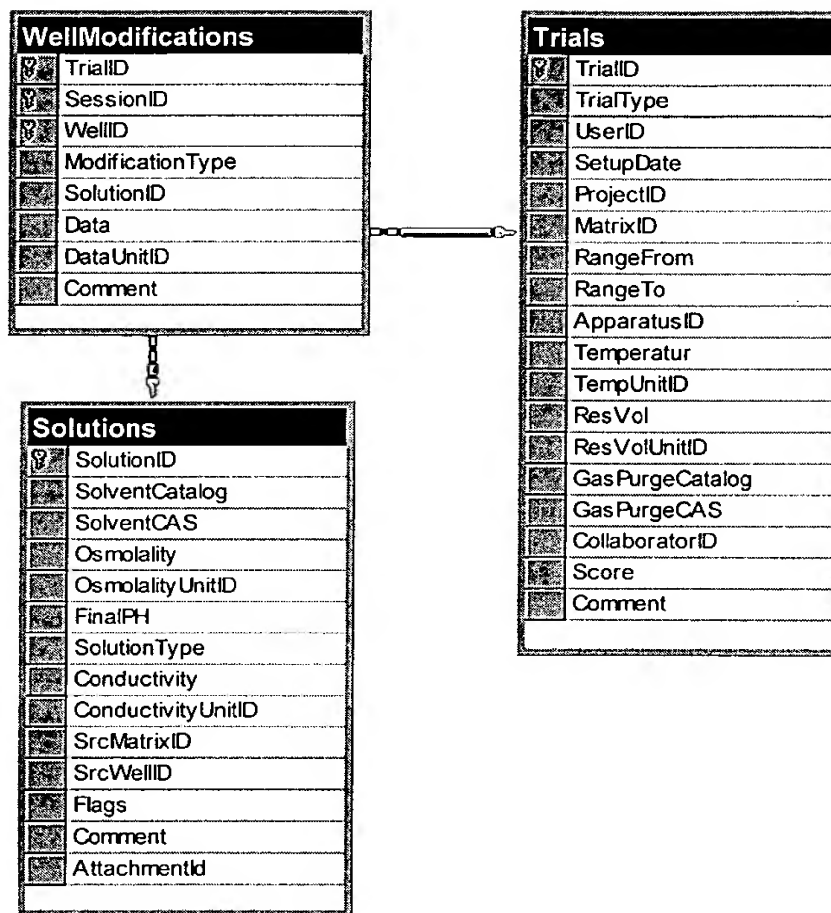
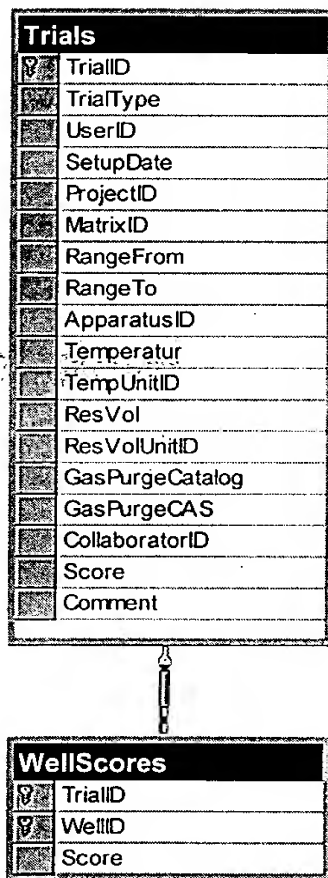


Fig. 262

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**Fig. 263**